

**The
Himalayan Gazetteer
or**

**The Himalayan Districts of the
North Western Province of India**

In 3 Vols. (6 Parts)

Edwin T Atkinson

Vol. 3 in 2 parts

Part - 1

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PREFACE.

THE present volume concludes the historical, geographical and statistical account of the Himálayan districts of the North-Western Provinces in accordance with the instructions conveyed in Government Resolution, North-Western Provinces, No. 724A., dated 21st April, 1875, which will be found in the preface to the second volume of the Gazetteer. It was there laid down that the work should aim at a position differing from and somewhat higher than that of an ordinary Gazetteer, should be complete in itself and contain an account of all matters of interest connected with each district, or a reference to them where a detailed description was considered unnecessary. It was further directed that a description and history of each fiscal sub-division should be given, sufficient to place officers new to the district charge in possession of such general knowledge of the physical capabilities of the tract, its fiscal history and its inhabitants, as may enable them at once to exercise an intelligent control over its administration. This extended scheme was adopted in view of the failure of the District Memoirs, and was intended to supply their place, merely omitting in settlement notices details of a purely executive character, such as the reasons for adopting certain classifications of soils in particular localities, the details of the survey demarcation of boundaries, preparation of records, the adjustment of circle rates and such similar matters.

The first two volumes contain all matters affecting the entire Himálayan tract in the North-Western Provinces

as a whole. The present volume gives the topographical, statistical and other local information for each fiscal sub-division and important tract, town or place, in the Kumaon, Garhwál, Taráí, Dehra Dún and Jaunsár-Báwar districts. The sections under each notice compress within a reasonable compass everything of interest not only in the local official records, but in papers that have been printed at any time besides the results of much original inquiry. The notice of each of the numerous fiscal sub-divisions, most of which were recently created and had to be carefully defined, contains all that it is necessary to know for good administration regarding its fiscal history past and present, its physical peculiarities and the population recorded at settlement. Under Kumaon will be found a brief and accurate account of every settlement, and the results given are in accord with the statistics recorded in the last report on the current settlement. The Jaunsár-Báwar notice also gives the result of the recent settlement. The Dehra Dún final settlement report has not been received, so that Mr. Williams' Memoir must be referred to for its fiscal history.

I have to thank Sir Henry Ramsay for assistance and advice throughout the work, and especially for the materials for the notice of the Bhábar, the administration of which has been especially his own work. Mr. Macdonald and Mr. Kilvert have aided in the notice of the Taráí, and the former has examined the proofs. Mr. F. Fisher, C.S., supplied in great part the notices of Mussoorie and Dehra, and Major Reade examined the proofs of the portions relating to Garhwál whilst passing through the press. I would especially here record my obligations to Colonel Garstin for his considerable aid in correcting notices of portions of the hills towards and beyond the snows which I was unable to visit and for examining the

proofs of the entire Kumaon portion of the volume. No trouble has been spared, therefore, to make these volumes complete and accurate, and this the last with which I shall have any connection now passes out for the judgment of my brother officers, who will best be able to state whether it fulfils the conditions above referred to or not.

CALCUTTA :
February 19, 1886. }

E. T. ATKINSON.

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THE HIMÁLAYAN DISTRICTS

OF THE
NORTH-WESTERN PROVINCES.

VOL. III.

Adbadri, a halting-place between Lohba and Karnprayág, is situate in patti Sili Chandpur of parganah Chandpur in British Garhwál in latitude $30^{\circ}-9'$ and longitude $79^{\circ}-16'10''$: distant 10 miles 7 furlongs and 2 poles from Lohba and 10 miles 5 furlongs from Karnprayág. There is an encamping-ground and *dharmshála* (rest-house) here. The road from Lohba or Gairsen gives off a branch there to Náráyanbugur on the Pindar river and itself crosses the Diwáli range (7,963 feet) by the Diwáli-khál at an elevation of 7,010 feet above the level of the sea. Near the pass are the remains of a fort and the ridge forms the waterparting between the Rámanga and the Pindar. The road thence follows the right bank of the Bhararigár by the villages of Málsi and Kheti to Adbadri. The road is good and passes through beautiful scenery. On the right are the Kandal (8,553 feet), Suilidánda (8,936) and Bintál (8,300) peaks, and on the left the Diwáli (7,963 feet) and Beri (5,479) peaks. Just above Adbadri is the small lake of Beni Tál, where there is a tea-factory.¹ At Adbadri are the remains of sixteen temples similar to those found at Dwárahát with the usual Turk's cap ornament. One dedicated to Badrináráyan is still used for worship, and the people say that in a few years' time the road by Joshimath to Badrináth will be closed by the meeting of the opposite hills near the temple, and that then this temple will be the object of pilgrimage. The other temples, too, are used in a lesser degree for worship. They are all crowded together in a space of about 42 by 85 feet and vary in height from 6 to 20 feet. The principal temple is distinguished by a raised platform or *chabutra* in front, roofed in and leading to the small square enclosure

¹ See *Gaz.*, XI., 784.

of the usual pyramidal form, within which is the idol itself. The solitary occupant of the temple at my visit was a Brahmachári fakír from Midnapur in Bengal who had taken up his residence there for some five years. Local tradition here assigns the building of the temples to Sankara Achárya, the celebrated reformer and Hindu philosopher, while in Kumaon the same style of building bearing traces of similar antiquity is attributed to the piety of the Katyúra Rujas.

Aglar, a patti of parganah Rámgar in Kumaon, is bounded on the north by patts Mahryúri Bichhlí and Kotauli Tallí; on the east by Mahryúri Bichhlí; on the west by patts Rámgar Mallá and Tallá and on the south by Mahryúri Tallí. This patti comprises nineteen villages having an area of 1,825 *bísas*, of which 574 are culturable and 1,251 are cultivated (only three irrigated). The assessment in 1815 was Rs. 1,309; in 1820 was Rs. 1,148, and in 1843 was Rs. 1,122. The present assessment amounts to Rs. 1,522, which falls on the total area at 13 annas 4 pies per acre and on the cultivated area at Rs. 1-3-5. The population at the time of last settlement numbered 2,995 souls, of whom 1,550 were males. It is chiefly inhabited by the Agari caste of miners who give their name to it.

Agaspur, a village and halting-place on the route by Mási from Páori to Almora, is situate in patti Chaukot Bichhla of parganah Páli in Kumaon in latitude $29^{\circ}52'-15''$ and longitude $79^{\circ}18'-18''$: distant 12 miles 1 furlong 22 poles from Kúnjoli and 12 miles 3 furlongs 33 poles from Mási. The road from Kúnjoli on the left bank of the Pachrá-r-gádh, a tributary of the Eastern Nyár on the right bank, passes to Baijiráu on the road from Kainúr to Rámnagar, and here crosses the Nyár by a bridge of 62 feet span, thence a short level, rise and fall leads to the ascent to Chyúrkot-khál or pass and thence to Saráikhet-khál on the borders of Kumaon and Garhwál 7 miles 7 furlongs 33 poles. Several streams are passed on the way to Jamnri-khál, whence a level road leads to Agaspur Dya, 4 miles 1 furlong 29 poles. The road is a good one throughout and is much used by all the inhabitants of southern Garhwál.

Aglár, a small river which rises on the northern declivity of the Surkanda peak in latitude $30^{\circ}25'-25''$ and longitude $78^{\circ}20'$ at an elevation of 7,130 feet above the level of the sea in patti Dasjyúla of parganah Jaunpur in Native Garhwál, and thence flows

rapidly to the westward through a deep and narrow valley, and after a course of about twenty-three miles falls into the Jumna on the left bank, near the Jaunpur fort, in latitude $30^{\circ}-30'-55''$ and longitude $78^{\circ}-2'-50''$.

Ajmer, a patti of parganah Ganga Salán, is bounded on the east by patti Tallá Silá of parganah Tallá Salán, on the south by the Kotri Dún and the Bijnor district, on the west by the Udepur patts and on the north by the same patts and Dhángu. A road from Kotdwára to Srinagar runs just within its eastern boundary, passing by Charekha, Dúni and Malniya, at the first of which there is a ruined bungalow. Other villages are Mathána, Kanda, Buli and Utúrcha, connected with the Kotdwára road by a cross path; Kaphaldi, Juda-Ráwalyál and Manjyári to the north and Mawakot to the south, also connected by a path with Kotdwára. Simalna lies to the south-west: there is a school at Gúm. In 1864 six villages were received from Karaundu. The patwári of Ajmer usually resides in Ghota of patti Silá Tallá and collects the land-revenue of that patti also; in 1864 the revenue of both aggregated Rs. 2,146. Charekha travellers' bungalow lies in longitude $78^{\circ}-37'$ and latitude $29^{\circ}-49'$.

Alaknanda, a river in British Garhwál, formed by the junction of the Dhauli (western) and Vishnuganga at Vishnuprayág in parganah Painkhanda.¹ At the confluence, the Dhauli has a breadth of about thirty-five or forty yards with a rapid current, and the Vishnuganga a breadth of twenty-five or forty yards also with a rapid current. The elevation of the confluence above the sea is 4,743 feet. The united stream flows south-west to Chamoli, receiving the Rudr, Garúr and Pátal Gangas and the Birhi or Birahi-ganga at Birhi. Thence, in a southerly direction, to Nandprayág, where the Nandákini joins it from the east in latitude $30^{\circ}-19'-56''$ and longitude $79^{\circ}-21'-29''$ at an elevation of 2,805 feet above the level of the sea. Again it turns south-west to Karnprayág, 45 miles from Vishnuprayág, where the Pindar joins it on the left bank in latitude $30^{\circ}-15'-45''$ and longitude $79^{\circ}-15'-29''$ with an elevation of 2,600 feet. Thence nearly due west to Rudrprayág, 19 miles, where it receives the Mandákini from the north on the right bank in latitude

¹ See *Gaz.* XI., 292, 307, 321, 347.

30°-17'-10" and longitude 79°-1'-32" at an elevation of 1,980 feet. Turning again now south-west it flows by Srinagar to Deoprayág, 37 miles, when it is joined by the Bhágirathi from Tihri in latitude 30°-8'-45" and longitude 78°-38'-56," with an elevation of 1,953 feet, after which it is styled the Ganges. At one place called the Kákar's leap from the tradition of a *kákar* or barking deer having jumped across it, the river narrows to about 25 feet and rushes through a cut in the rocks which rise at least 500 feet perpendicularly on either side, opening out into an immense and deep pool. From this point, which is about four miles above Rudrprayág, the fall is not so great and the general appearance is long reaches with short rapids until it reaches Deoprayág. At this place a huge mass of rock appears to have fallen into the stream, narrowing it to half its proper breadth just before it is joined by the Bhágirathi. On the top of this rock some fifty feet above the river is a rope bridge leading from British Garhwál to Deoprayág, which is in Native Garhwál or Tihri, and so much does the river rise in the hot weather and rains that this bridge is frequently swept away. At the confluence the Bhágirathi rushes with great force and rapidity down a steep declivity, roaring and foaming over large rocks scattered over its bed. Its breadth is 112 feet and it rises 40 feet during the melting of the snows. The Alaknanda flowing with a smooth unruffled surface gently winds round the point of confluence. It is 142 feet in breadth and rises 46 feet at the same period. The breadth of the united stream is 240 feet. The Alaknanda abounds with fish, some of which are four or five feet in length. The *maháser* (*soher, shahur*) is found weighing up to 80 pounds, and the dog-fish or *ashídla* and *káldbans*, a species of barbel. Gold in small quantities has been obtained by searching the sands of this river, but the remuneration resulting (about four annas a day) has been so scanty that the search is nearly discontinued. There are four iron bridges over the Alaknanda, a tie-bridge at Chamoli, and iron suspension-bridges at Chhatwa-pípal Rudrprayág and Jákhni, one and a half miles below Srinagar on the Almora and Tihri road. The last named is 301 feet span from saddle to saddle. From Joshimath downwards the stream is used for the rafting of timber. There are several fine forests of *Smilheana*, *Webbiana* and *excelsa* firs on its eastern bank from Rudrprayág to Pípkoti. Below this *chir* pines occur up the Nighaul

valley opposite Nandprayág, on the slopes of the Nágpur hills opposite Chhatwa-pípal at Pokhri and as far as Dhari near Srinagar.

Almora¹, the head-quarters of the Kumaon Division in patti Khaspurja of parganah Barahmandal of the Kumaon district, is situate in latitude 29°-37'-3" and longitude 79°-40'-20", by the lower road 30 miles from Naini Tál, 46 miles from Káládhungi; it is 19 miles from Ránikhet. The town and the civil and military station are built on a bare saddle-shaped ridge running north-west to south-east for about two miles with an elevation varying from 5,200 to 5,500 feet. The jail stands at about 5,439 feet and the church at 5,495 feet above the level of the sea. The station is connected with the higher ridges of Simtola and Kalmatiya to the west by a *col* called Mount Brown or Híradhunga, so called from its micaceous rock which shines like a diamond (*híra*) in the morning sun. Kalmatiya has an elevation of 6,414 feet above the level of the sea, and Simtola an elevation of 6,066 feet. The building known as Simtola house lies in latitude 29°-37'-3" and longitude 79°-43'-21," with an elevation of 6,200 feet. A lateral ridge called Sitoli runs westwards from Híradhunga towards the Kosi river and exactly faces Almora to the north. The intermediate space is crowded with houses and cultivated terraces and possesses a small stream which rises in a spring under Híradhunga, called by the natives Ráni-dhara and by the Europeans St. Ronan's Well. On the east and south the Almora hill is bounded by the Suwál river and on the west by the Kosi, so that it is almost a peninsula connected with the other hills by the Kalmatiya ridge. To the south-west the ridge after attaining its highest point of elevation at Charalekh dips down in a bold and rugged series of masses to the point of junction between these two rivers. The ascent from the bridge crossing the Suwál and the Sukuni (Gorari) near their junction on the Naini Tál road is exceedingly steep and trying, especially in the hot-weather, when the heat reflected from the bare gneiss rocks and the white dust from the road alternately roast and blind the traveller. After passing the leper asylum and the Charalekh bungalows a very pretty Gothic church is reached, erected under the superintendence of Captain Weller and now under the ministration

¹ The name is said to be derived from the *Almora* or wild sorrel (*Rumex acetosa*), which grows in abundance on the hill. The Chand Rajas always called it Rajepur in official documents: see *Gaz.*, XI., 554, 559, 560, 570, 587.

of the Naini Tál chaplain, who visits Almora once a month. Close by and around are the residences of the European community and Fort Moira, otherwise called *Lál Mandi*, and the parade-ground. The Kumaon battalion was formerly posted at Hawálbág in the valley of the Kosi about five miles north of the present cantonments, but that has long been abandoned as a military station and the Kumaon battalion is now represented by the 3rd Gorkha regiment, who garrison the fort and supply a strong detachment to Pithoragarh under the command of a Native officer and guards to Naini Tál and Ránikhet.

The sepoy's lines dip down from the fort on the north-east and the officers' houses lie to the west and north. Between these and the town is the small Mission chapel with a Grecian portico and inscriptions in raised letters in Hindi. Then commences the town. The principal street is paved with stone flags and is about 30 to 50 feet in width and about three-quarters of a mile in length, divided into two bazars by the old fort and new Mission school. The slope from east to west is broken by flights of stone steps which render the street not easily passable for ponies. The houses are from two to four stories high and are substantially built of mica-slate and roofed with thin slabs of the same material. The upper stories are, however, usually constructed of wood quaintly and profusely carved and some bear decorative lamp-rests of deer's antlers. The windows are mere apertures for the most part resembling pigeon-holes cut in the wooden panel and closed by a slide. The general appearance of the town is compact and clean and the conservancy arrangements seem to be well carried out. Beyond where the north-eastern gate was, rises the old fort Almora, in the enclosure of which are situated the treasury and civil courts. An engraving of this is given by Tieffenthaler in his travels undertaken during the middle of the last century. Beyond this the top of the ridge is somewhat hollowed out and the space is occupied by a bazar, the office of the sub-collector of revenue and the Lala Bazar. Here also, on the site of the former residence of the Rajas of Kumaon, is the new Mission school. This school, opened in 1871, is a fine building in the Tuscan style, with a central hall 60 feet by 34 feet and a wing on each side containing four spacious class-rooms. The lofty roof of the hall ends in a portico supported by massive stone pillars.

The entire building is of solid masonry and the pediment and frieze have carved inscriptions in English and Hindi. The plan is due to Captain Birney, R.E., who also supervised the erection of the building. The dispensary is close at hand and then the road ascends towards the site of the Marchkilah or St. Mark's tower, a building long since pulled down. On both sides of the town on the north-western and eastern slopes, the hill side is adorned with very fine substantial isolated native houses and also villages embosomed in orchards of *tún*, walnut, cherry, Australian jack and apricot. The eastern side is less wooded owing to the greater steepness of the mountain face. There are several Hindu temples in Almora, but none with any pretensions to architectural merit; and there is only one mosque.

For a distance of about four miles around Almora on every side the hills are absolutely bare, but beyond that distance the mountains are as well timbered as any in the central parts of the district. Tradition has it that deodár trees were once plentiful on the north-west face of the hill, but from the nature of the soil it is improbable that these forests were ever extensive. The tradition regarding the transfer of the Chand capital here also points to Almora as being then covered with timber. The oaks on Kalmatiya are of a stunted growth, and the pines only attain a respectable size on the northern aspect of the range. Deodárs grow well when planted and many of the old houses are built of the wood of this tree, which would so far bear out the tradition.

Sixty degrees is about the annual average temperature of the air. In the hot weather, from May to 1st July, the climate of Almora, though at that season from 15 to 20 degrees cooler than

in the neighbouring plains, approaches to
Climate. a tropical type. Pankhas and tattis, how-

ever, are not required, and the thermometer (except for a few hours on some hot days before rain) can be kept down in a closed house to 74°. Whenever it exceeds 86° in an outside shaded verandah, rain or a thunder-storm may be expected, which sometimes at once reduces the temperature to 62°. In the rains 72° may be considered the average temperature, and at that season, which is very pleasant at Almora, though not cold and requiring fires as at Simla and Mussoorie, the range of the temperature is rarely 2°.

Midnight and midday in a cool room show the thermometer, in July and August, often for days together, at 72° or 73°. Outside in the shade the range rarely exceeds 10°. In winter, snow falls occasionally, but rarely lies beyond a few hours on the ground. Different years display different phenomena in regard to this matter: for instance, on December 11th, 1841, snow covered the ground at the level of the Kosi and Suwál rivers (3,700 feet); on December 31st, 1842, rain fell for hours, yet the Gágar range at 7,500 feet above the sea was without a particle of snow. Snow is most frequent in February, taking a number of years. October and November are beautiful clear cold months, and most of the fruit trees then lose their leaves. March and April are generally marked by thunder-storms, but in all the summer months, till the regular monsoon rain falls, a thick atmospherical haze prevails which obscures all the view. This haze, however, is common to the whole hills and is as dense near the snows as at Almora. The towns-people of Almora are for the most part very healthy, and the state of health in the cantonments, where, sometimes, the sepoy's suffer considerably, especially during their first seasoning to the climate, is no criterion of that of the town. Fever and dysentery seem to be the prevailing fatal diseases among the natives; and colic is often rapidly fatal, especially in the fruit and vegetable season. The bad fever of the typhoid form (*mahámari*) has not occurred at Almora.

At Almora in the rains, wild hems, nettles, thistles, worm-wood, *Mirabilis jalapa* (marvel of Peru), mint, *dhatúra*, and wild balsam, &c., spring up and produce a rank vegetation, but it is less grown over than most other hills, owing to the dryness and shallowness of the soil above the solid rock. Madden¹ has given a full account of the botany of Almora which has been incorporated in a previous volume². Micaceous schists of four different kinds according to their degrees of hardness and crystalline character, and according to the greater or less proportion of quartz, is the rock at Almora. On the descending ridge to the Suwál and Kosi on the south-east and south-west points, a great out-burst of granite prevails, which is connected with the eruptions of the same rock in an easterly and westerly direction at Kainár, Dwára, Dol, Devi-Dhára and Champáwat, always at a distance of about 40 miles from the plains.

¹ J. A. S. Ben., 1843.

² Vol. X., Gametian.

The decomposition of the feldspar causes the characteristic boulder-looking masses on the hills. Some of the granite however is compact and beautiful, especially near the gneiss strata out of which it is erupted, and the graphic variety is singularly so. Some of the mica slate strata and quartz veins show signs of great disturbance, as the Almora ridge approaches these granitic developments—and the hill sides in this direction (the south-west and the south-east) are uncommonly barren, rugged, and, to a fastidious eye, ugly.

Almora is peculiarly fitted as a resort for consumptive patients, but for other invalids the temperature is too high during May and June and does not give sufficient coolness to those who seek an invigorating climate after exposure to the heat of the plains; this, too, is enhanced by the almost total absence of shade. The supply of water is of an unusually good quality; springs abound on either side of the ridge within 300 feet of the crest and most of them within 150 feet of the top. That near the tank is directly on the crest of the ridge. In the hotter months some of the springs dry up or give a scanty supply, but taking the whole hill and putting aside the conventional distribution of the wells among the different castes, the general supply of water is nearly always sufficient for all purposes. A covered reservoir with a spout is the form usually given to these wells. All the springs rise in mica slate or quartzose veins which are numerous, and although on the Kalmatiya ridge traces of iron and graphite are observable, ferruginous matter has not hitherto been detected in the Almora waters. They are always cool and refreshing to the taste. In addition to the springs a never-failing supply of water is obtained by two aqueducts from Simtola. Almora is connected with Ránikhet by a new cart-road constructed in 1872-73 and a bridle-road by Hawálbág up the valley of the Náná Kosi, and thence by Tallá Ryúni to the eastern spur of the Ránikhet ridge, whence it is

Roads.

again nearly level to the dák bungalow, 19 miles from Almora. The road by Dwárahát to Garhwál follows the same route to within nine miles of Ránikhet, then on to Bhainskhet, where there is a bungalow (see BHAINSKHET). The Baijnáth and Nand-prayág road follows the Kosi valley from Hawálbág to Someswar, where there is a bungalow, 18 miles from Almora. The Bágeswar road proceeds by Tákula, where there is an encamping-ground 12

miles from Almora ; the road is winding and high, lying along the upper ridge of the hills with one steep descent to Tákula. A second road passes by Binsar to Bágeswar. To the east roads lead by Panuwa Naula bungalow, 16 miles from Almora to Pithoragarh, and by Devi Dhúra to Lohughát. Naini Tál is reached by Piura on the upper road 8 miles from Almora and thence Rámgar bungalow 10 miles and Naini Tál 13 miles ; by the lower road, which is exceedingly hot and feverish, during and after the rains the Khairna bungalow is 18 miles from Almora and Naini Tál, 12 miles from Khairna. The latter half of the lower route consists of a steep ascent along the western slopes of the Lariya Kánta ridge to the St. Loo gorge overlooking the lake.

In 1872, the total native population numbered 5,884 souls distributed as follows :—

Population.	Christians, 35 :
	Hindús, 3,972 :
	Muhammadans, 755, and Doms,

1,121. The ironsmiths (114), carpenters (251), masons (255), potters (111), mochis (73) and telis or oilmen (20) are all Doms, a low caste of Hindús. There were 745 Joshis, 195 Pants, and 1,404 other Brahmans. The Baniyas numbering 797, and the Sonárs 264, represented the trading classes. These figures include women and children and represented 170 castes and trades. Of the above, 4,811 souls lived within municipal limits. The population of the municipality in 1881 was 4,813, of whom 2,264 were females, and at the same time the population of cantonments was 920, of whom 264 were females. The population of the town during the same year, including Municipality, Cantonments, and Civil Station, was 7,390 (2,867 females), comprising 6,323 (2,451 females) Hindus ; 866 (317 females) Musalmáns, and 209 (103 females) Christians and others. In September, 1880, the total figure was 7,124. The muhallas or wards of the town are Lachhmeswar, Karariya-khola, Kapina, Galli, Chaunsár, Gurani-khola, Champanaula, Kholta, Deuripokhar, Chhipaltharha, Thapaliya, Chaugánpátha, Joshi-khola, Sela-khola, Chaudhri-khola, Siumerkot, Paniya-udiyár, Pokhár-kháli, Jhijhiyár, Jyár, Makirhi, Chínakán, Dharanaula, Tiunera, Khasiya-khola, Dániya, Nál-khola, Dabkiya, Kugar, Dhagal-khola, Domtola, Lalabazar, Kárkhanah, Nakarchitola, Salimgarh, Sonár-patti, Banskigalli, Chhakála, Tirana-khola, Tamteura and Dhobi-khola. The word '*khola*' in the termination of the names of the

wards is equivalent to the '*tola*' and '*pura*' of the towns of the plains. The names sufficiently explain their origin and are derived from the caste or trade of the occupiers or founders or from some remarkable person or object.

There are several good shops at which European supplies can be procured, but no large market, and but little trade since the Bhábar marts at Káladhúngi, Rámnagar, Barmdeo, and Haldwáni and the bazars at Ránikhet and Naini Tál have come into existence. The municipality was formed in 1864, but the income is only about Rs. 5,600 per annum. The receipts of the Almora Cantonment fund amounted to Rs. 308 during 1882-83 and the expenditure to about the same. The greater portion of the grain used is brought on ponies from the Bhábar, whilst the produce of the upper parganahs is disposed of to the Bhotiyas. Wood for local consumption is brought in from distances varying from six to eight miles chiefly by women, who here, as at Naini Tál, form the chief portion of the cooly population.

Amongst the local institutions are a station library, reading-room and racquet-court, and a native debating society and library established in 1870 by former pupils of the Mission School, who have a library, printing press, and a fortnightly newspaper of their own. There is also a branch of the London Mission here and at Ránikhet, and of the American Mission at Naini Tál and Páori in Garhwál. Schools have been opened at Pithoragarh, Champáwat, and Gangoli Hát, and the character of the instruction given is shown by the success of the pupils at the usual examinations and their appointment to posts of considerable value in the public service. The leper asylum is another of the charitable organisations of Almora well worthy of extended support. In 1884 it contained 114 inmates, of whom 69 were Christians. These come from all parts of the hills, including Nepál. The asylum possesses a neat row of barracks and a pretty little church, at which divine service is performed every day.

The history of Almora has already been told in the history of Kumaon. The real reason for the abandonment of Champáwat was doubtless its distance from the recently conquered and far more valuable possessions to the west. Madden notices the legend

that Kalyán Chaud was hunting in the forest which then covered the site of Almora when a hare chased into a thicket became a tiger, which was considered so good an omen that the Rájá forthwith selected the spot as the site of his future residence and promised that whoever dared to hunt any of his race should soon discover that he had tigers to deal with. At Sitoli close by Almora was fought the decisive battle which ended in the cession of the whole division to the British in 1815. Since then Almora has more than regained its former prestige as the head-quarters of the Civil administration.

Ambári, a village in the western Dún, on the road from Saháranpur to Chakráta, close to the Jumna 26 miles from Dehra. It is the site of a tea-plantation and has a Public Works bungalow.

Amsot, a village in the Dehra Dún district, lies in latitude $30^{\circ}22'45''$, and longitude $77^{\circ}43'42''$, at an elevation of 3,139·8 feet above the level of the sea. The upper markstone of the Great Trigonometrical Survey station is situated on the highest point of the same range as Dhoiwála. Timli is the nearest village, being about three miles to the north-east. This height was deduced trigonometrically.

Annfield, a village in the western Dún, two miles from the Jumna. It is the site of a tea-plantation and an agricultural colony of Native Christians established by the Revd. T. Woodside in 1859 and now a flourishing settlement, self-supporting and containing a church and school.

Asan, a river of the western Dún, rises in the ravines near Harbanswála to the west of the Mohand and Dehra road at an elevation of over 2,000 feet and after a north-westerly course of about 26 miles falls into the Jumna below Rájghát. This stream receives no tributaries except mountain torrents from the Himálaya on the north and the Siwálíks on the south, and is only noticeable as being the main drainage channel of the western Dún.

Asarori, a police out-post in the western Dún at the northern foot of the Mohand pass on the Dehra and Mohand road.

Asi, a patti of parganah Káli Kumaon in Kumaon, is bounded on the north by patti Chálsi; on the east by Pharka and Sipti; on the south by Talla Pálbelon and on the west by Malli and Talli Ráu.

This patti was separated from Asi-Chálsi or Chálsi at the recent settlement. The principal villages are Guin, Garhsári, Hauli, Jaulárho and Páti.

The assessable area comprises 2,695 *bísis*, of which 1,002 are culturable and 1,693 are cultivated (156 irrigated). The land-revenue gave Rs. 484 in 1815, Rs. 785 in 1820, Rs. 1,148 in 1843, and now is assessed at Rs. 2,091, which falls on the whole area at Re. 0-12-5 and on the cultivation at Re. 1-3-9 per acre. The population at settlement numbered 1,947 males and 1,638 females. Three villages were received from Pábelon and one from Sipti at the recent settlement. The villages are numerous and highly cultivated and on the higher ranges produce good crops of hemp.

Askot Mallá, the upper patti of parganah Askot in Kumaon, is bounded on the north by patts Goriphát and Tallá Dármá; on the west by patti Dindihát of parganah Síra; on the east and south-east by the Káli river, which separates it from Nepál, and on the south by Tallá Askot. This patti was separated from Askot at the recent settlement. For its statistics see ASKOT TALLÁ. In connection with this patti, however, mention may be made of the Rájis the *ban-manus* or wild men of the woods as they have been called, who inhabit the forests of Chhipula. Askot is said to have had originally eighty forts, and hence the name. The first of these was Champáchal or Lakhanpur Kot, near which are the remains of the old town of Bagrihát. The Rájbárs are Katyúris and held sway over the Bhotiya valleys from Juhár to Byáns, subject to the Raika Rásas of Doti. On Champáchal there is a temple to Mahádeo where offerings are made to the sylvan deities by the Rájbár, and on Chhipula or Najúrkot there is a great cave at which a fair is held every year, also a dry pond held sacred to the deity of the hill.

The ghát here is the only direct communication with lower Kumaon for Dhárchúla, Kela, Chaudáns, Dármá and Byáns.¹

Askot Tallá, a patti of parganah Askot in Kumaon, is bounded on the north by the Mallá patti of the same parganah; on the west by the Athbisi Mallá and Bárabisi patts of parganah Síra; on the south by the Kharáyat and Kharkdes patts of Shor, and

¹ See further Gaz., XI., 305, 449, 455, 494, 527, 531.

on the east by the Káli river, which separates it from Nepál. The Bagrihát, Charma and Shangli *gáras* or streams flow eastwards into the Káli nearly parallel to each other. Daoda is situated at the confluence of the last with the Káli; Dhawalisera at the mouth of the Charma and Bagrihát on its own stream. The road from Lohughát *riá* Shor to Dármá passes through the western corner of the patti and has the villages of Mithála, Maláhu, Ulma and Jethgaon on it. To the south-east of Ulma, Larilekh rises to a height of 6,031 feet, and between it and Bagrihát the country slopes down and is more open and occupied with villages like Shúmkot. The valleys of both the Charma and Shangli are highly cultivated. The Mallá and Tallá pattis were separated at the last settlement and together comprise the tract on the right bank of the Káli south of Chaudáns and north of the Dhvaj peak. The junction of the Gori with the Káli takes place immediately below the fine ridge on which Askot itself is built. The portion along the river is very low and marked by a highly tropical vegetation. The slopes stretching down from the high southern hills and the Askot ridge itself are open and healthy and the position of the tract is favourable for the sale of its products to the Bhotiyas, large parties of whom winter within its borders. In a military point of view the ridge of Askot may be considered the key to the Dármá and Byáns passes, for the only practicable way to them is along the bed of the Káli.

Mallá Askot comprises one waste and 18 inhabited villages and Tallá Askot three waste and 124 inhabited villages; the statistics of both may be shown thus :—

	AREA IN <i>báras</i> .				ASSESSMENT IN RUPEES				POPULATION.	
	Total.	Cultivated.		Cultura- ble.	1815.	1820.	1843.	Current.	Male.	Female.
		Irriga- ted.	Dry.							
Askot Mallá ...	1,216	173	739	302	165	303	514	514	1,069	931
Askot Tallá ...	2,972	516	1,404	1,052	544	693	660	736	2,070	1,809
Total ...	4,188	689	2,143	1,354	709	996	1,174	1,250	3,139	2,740

The assessment falls at four annas nine pie per acre on the total area and at seven annas one pie per acre on the cultivated area. The patwái usually resides at Bárakot and there is a school at Dewal.

The tenure of land in Askot is unique in Kumaon, it being the only parganah where the form of right in land known as *zamindári* exists in these hills. This has been held for many generations by a family connected with the old Katyúri Rajas and who bear the affix *Pála* to their names and have the title *Rájbár*. Some account of them has already been given in the history of Kumaon,¹ and here we have only to deal with the fiscal history of the estate. The *Rájbár* had enjoyed the revenues of Askot for many generations until at length they fell under the rule of the Chunds, who, however, left the *Rájbár* in possession, merely exacting an annual *nazarána* or fine in token of supremacy. The total of this due at the period of the Gorkháli conquest amounted to Rs. 400 per annum and was gradually increased by them to Rs. 2,000, at which sum it stood at the British occupation.² This sum, though it probably equalled the full amount which could have been demanded from the whole parganah on a regular assessment, was never settled as such, but continued to be fixed in one item under the name *tanka*, a term equivalent to *nazarána*, and at our earliest settlement a fixed sum was accepted at a reduced rate. With a view to the permanence of the *rāj*, it had been an invariably family custom that only the eldest son should succeed to the inheritance, whilst the junior members of the family merged in the body of landholders. During the Gorkhali occupation this rule was infringed upon and dissensions arising on the death of the *Rájbár* led to the successive appointments of Rudrapál and Mahendrapál, the brother and son of the deceased *Rájbár*, according as each outbid the other for the favour of the local Gorkháli commander. At the first settlement made by the British Government both these persons were admitted in the engagement and lease for the parganah. This lease differed from the former engagements in that it specified the villages by name and distributed the lump assessment amongst them. This apportionment of the State demand was, however, drawn out wholly on the judgment of the *Rájbárs* themselves, without any reference to the opinions of the village landholders. The same system was pursued at the second settlement, and at the third the only difference was that the name of Rudrapál was

¹ *Gaz.*, XI., 365, 455, 494, 531, &c.

² Traill, June 30th, 1821.

omitted from the engagement paper with his own consent, in pursuance of some private arrangement between him and Mahendrapál. This circumstance led to subsequent divisions between these persons and terminated in a suit in court instituted by Rudrapál; the result of this was a decree in favour of the plaintiff for the Rájbari of one-third of the parganah as it stood at the formation of the first triennial settlement. Accordingly this division was carried into effect by arbitration and three leases were granted; the first to Mahendrapál, for his share or two-thirds, the second to Rudrapál for one-third, and the last to Mahendrapál for the newly-cultivated villages reclaimed through his means within the preceding three years and which were not included by the court in the adjudged division. Claims were at the same time preferred by other members of the family to specific shares in the Rájbari, but as none of these claimants appeared to have ever been admitted during the former or last Government to the engagement for any of the rights or privileges of the Rájbari, their demands on the ground of local usage were dismissed.

The smaller share came down by regular succession to three brothers—Pirthi, Sarabjít, and Mohkam. In 1832, Mr. Traill allowed a separate engagement for the land-revenue of Helpiya and its twenty-four hamlets to Mohkam Singh, while Dewal and its eighty-three hamlets remained in the lease of the Rájbari. Receiving a sanction never before accorded by custom or local law, these new landlords as distinguished from landholders tried their new rights by getting deeply into debt, with the result that they fell into the hands of the Almora usurers and were brought into the civil courts. They resisted in their own stupid way. Mohkam Singh fled for refuge to his relatives in Doti, but Pirthi Singh was seized and remained for some time in the civil jail at Almora. The upshot of this litigation was that their estate was sold in satisfaction of decrees of the civil court in 1843, and the principal creditor, one Krishna Sayál, became the purchaser. The elder brother of the purchaser, Híra Lal Sayál, had, previously in the course of the litigation, mysteriously disappeared and foul play on the part of the debtors and their friends was suspected. The new settlement was then made with Krishna Sayál at the former revenue, Rs. 273, but it fared as badly with him as with his brother,

for on proceeding to take possession he was murdered by the sons of Pirthi Singh and Mohkam Singh, who again fled for protection to their relatives in Doti. The heir of Krishna Sayál was a minor, and with the consent of the Commissioner the estate was for some time managed by the Rájbar, who accounted for the proceeds. During this time opportunity was taken to examine into the resources of each village and the condition of the cultivators, and it was found that a great portion of the actual tillers of the soil were immigrants from Doti. The estimated value of the out-turn was Rs. 364 with *sr* land and customary dues called *ság-pát* or *dola-dhek* and extraordinary dues known as *tika-bhet*, such as personal service in carrying loads and litters. The right to the Rájbari has always been held to depend upon the will of the paramount power and immemorial usage has sanctioned the rule that so long as the Rájbar provides in a suitable manner for the dependants of his own house, he is entitled to all the profits of the estate and is unfettered in the mode and amount of distribution. In 1847 the property was again sold in satisfaction of a decree of court, and this time the purchaser was Tularám Sáh, the treasurer of the Almora collectorate. He found means to obtain possession in the following year, but Rájbar Pushkar Pál repurchased his rights in 1855 and is now the zamindár of all Askot, which he holds on the same terms, i.e., he may increase the cultivation to his own profit and make such arrangements as he may think advantageous for the *taluka*, but he cannot interfere with the permanent tenants' possessions recorded in the village papers.

Aswálsyun, a patti of parganah Búrahsyun, lies in the south-east corner of that parganah between the right bank of the western Nyár and the united Nyárs. The soil is rich and the population is industrious but very litigious. The principal villages, most of which are good, are Nagar, where there is a school, Bhatgaon, Saraon, Súralgaon, Chámi Saknoli, Mirchwara, Súla and Kúga. The name is derived from the Aswál caste, who inhabit the patti. Nagar lies in longitude 78°-39' and latitude 29°-59'. In 1864, seven villages were transferred to Manyársyun. The patwári usually resides at Dángi in Manyársyún and collects the land-revenue of both pattis, which in 1864 from all sources amounted to Rs. 2,431.

Athágúli, a patti of parganah Bárāhmandal in Kumaon, is divided into two, the Walla and Palla pattis. The former occupies the left bank of the Gagás river in that portion of its course where it is crossed by the Ránikhet and Dwára road and extends from Ránikhet to the river. The latter occupies the corresponding portion of the right bank. The principal places in the Walla patti are:—Ránikhet, Badhan, Bugúna, Chaunkúni, Dugaurha, Jhalorhi and Walna, and in the Palla patti are Airári, Bánsula-sera, Bhet, Bhandargaon, Chyáli, Dhunkhalsaon and Ubhyári and Aror, in both of which last there are schools. The patwári usually resides at Bagwáli-Pokhar. The statistics of the two pattis may be shown thus:—

Athágúli.	AREA IN <i>bísis</i> ASSESSABLE.				ASSESSMENT IN RUPEES.				POPULATION.	
	Total	Cultivated.		Culturable.	1815.	1820.	1843.	Current.	Males.	Females.
		Irrigated.	Dry.							
Palla ...	2,930	152	2,427	351	911	1,638	1,814	3,423	2,175	1,880
Walla ...	2,575	39	2,040	405	598	921	966	2,108	1,825	1,618

The assessment per acre on the total assessable area in the first amounted to Re. 1-2-8 and in the second to Re. 0-13-1; and on cultivation in the first to Re. 1-5-3 and in the second to Re. 1-0-3. About 116 *bísis* are held as *gúnth* and *muáfi* worth nearly a rupee per *bísi*.

Athbisi Malla, a patti of parganah Sira in Kumaon, is bounded on the north by Dindihát; on the south by patti Bárabisi; on the west by Talla Athbisi and on the east by Talla Askot. The upper valley of the Charm-gár, a tributary of the Káli, drains the patti. The principal villages are Durlekh, Hanchila and Ujerha. The statistics of the Malla and Talla pattis may be shown thus:—

Athbisi.	AREA IN <i>bísis</i> ASSESSABLE.				ASSESSMENT IN RUPEES.				POPULATION.	
	Total.	Cultivated.		Culturable.	1815.	1820.	1843.	Current.	Males.	Females.
		Irrigated.	Dry.							
Malla ..	327	170	85	71	282	367	420	546	428	349
Talla ...	509	131	193	185	226	303	343	555	421	343

Some 43 *Usis* are held free of land-tax. The revenue falls at Re. 1-10-8 per acre on the total assessable area in the Malla patti and at Re. 1-1-5 per acre in the Talla patti: the rate on cultivation is Rs. 2-2-9 and Re. 1-11-5 per acre respectively. The pat-wári usually resides at Nankuri.

Athbisi Talla, a patti of the Síra parganah in Kumaon, is bounded on the west by Máli; on the east by Athbisi Malla; on the south by Bárabisi and on the north by pattis Máli and Díndihát of the same parganah. The southern portion of the patti is drained by a tributary of the Rámganga, crossed near its confluence with the Rámganga by the Thal road at the village of Moháni. The other principal villages are Bunga-Bora, Lima-Bhat and Sera-Saunáli. At the extreme south-eastern boundary of this patti the Lori peak rises to a height of 7,763 feet. One village was transferred to Díndihát and three to Máli at the recent settlement. The separate *shr* or private holding of the Ráni regnant of the former Malla dynasty here was known as Athbisi, whilst Bárabisi formed the military assignment.

Athgaon, a patti of parganah Gangoli in Kumaon, is bounded on the north by the Bhadrapati-gár, which separates it from Kam-syár; on the west and south-west by the Sarju river; on the south and south-east by patti Bel and on the east by patti Baráun of the same parganah. The principal villages are Chak-Bora, Chaunda, Nadoli, Pokhri and Bankaul on the Bhadrapati. The road from Almora to Askot passes through the northern part of the patti and that to Pithoragarh just below its southern boundary.

In the north-west the peaks of Vásuki-Nág and Gauri-devi attain a height of 6,889 and 5,889 feet respectively, yet are clothed with cultivation to the summit. To the east there is less cultivable ground and here the peaks average about 5,400 feet. The assessable area comprises 3,492 *bisis*, of which 1,708 are culturable and 1,783 are cultivated (480 irrigated). The land-tax at the conquest amounted to Rs. 237; in 1820 to Rs. 319; in 1843 to Rs. 516, and is now Rs. 2,101, which falls on the whole assessable area at Re. 0-9-8 per acre and on the cultivation at Re. 1-2-10 per acre. The revenue-free area amounts to 242 *bisis* and 1,285 *bisis* are held in fee-simple. The population at the time of settlement numbered 3,256 souls, of whom 1,740 were males. Twenty-one villages were

received from Baráon and 37 from Bel, whilst five were transferred to Kamsyár at the recent settlement. The patwári usually resides at Chamtola and there is a school at Ganáí.

Ayárpátha, a mountain rising to the south of the Naini Tál lake, in latitude $29^{\circ}-23'-2''$ and longitude $79^{\circ}-29'-20''$ of which the northern peak has an elevation of 7,639 feet above the level of the sea. This mountain derives its name from the presence of the 'ayár' or *Andromeda ovalifolia*, a tree giving a small white flower in the rains resembling a 'lily of the valley.' The young leaves are poisonous for sheep and goats, who seem however to be very fond of it. Ayárpátha is also mentioned in the notice of Naini Tál.

B.

Bachhansyun, a patti of pargana Dewalgarh in British Garhwál, is bounded on the north by the Ganges, which separates it from Tihri on the south by patti Kandársyún; on the east by the same patti, and on the west by patti Chalaunsyún. This patti was formed from Dewalgarh in 1864. The patwári usually resident in Nawásu, collects the revenue of Patti Chalaunsyún also; both aggregating Rs. 2,147 from revenue and *sadabart* and Rs. 42 from revenue-free grants, with a total population in 1864 of 4,195 souls. This patti comprises the valley of the Bachhan-gadh, in which are situated the villages of Bámsu, Nawásu, Barsuri, Dhankot and Dúngara, where there is an iron mine. Unworked copper mines exist at Pípali, Dúngara and Tilni Tauna.

Badalpur, a patti of pargana Talla Salán, was divided into two pattis at the settlement in 1864 known respectively as the Malla or upper and the Talla or lower. They together to the south of the Eastern Nyár river and are bounded on the west by pattis Kauriya and Sila; on the east by pattis Kolagár, Iriyakot and Painún, and on the south by the Patti Dún. The road from Páori to Kotdwara runs through a small portion of the north-west corner of the Malla Patti. The chief villages are Sinala with iron mines, Kharkholi, Kota, Toli, where there is a school, and Byáli. In the Talla Patti are Mathiyáli, Asankhet, Rámákesera and Maraura. The drainage of the northern portion flows into the Nyár; and of the Talla Patti into the Rúnganga. The Mandhál stream rises in the latter tract near Painwálgaon. In

1864 the villages to the north of the Nyár were transferred to the neighbouring patti, Gawána Talla to Kolagár, Halóni to Gurársyún, and twelve villages to Maudársyún, while Kandni was added to the Malla patti from Khátali and Negiyána from Bijlot to the Talla patti. The census statistics are as follows for both Pattis: in 1841, 3,457 souls; 1853, 6,927; and 1858, 7,099. The patwári of Badalpur Malla usually resides in Toli and collects the land-revenue of Kauriya Walla also, which in 1864 aggregated Rs. 2,507; the patwári of Sila Malla collects the revenue of Badalpur Talla. Badún lies in longitude $78^{\circ}49'40''$ and latitude $29^{\circ}51'$.

Badhán, a parganah of the Garhwál district, contains six patti or sub-divisions, each of which is separately noticed, viz.:—Khansar, Kapíri, Karakot, Nandák, Pindarwár and Pindarpár. Badhán is bounded on the north by Páinkhanda and Dasoli; on the east and south by Kumaon, and on the west by Chandpur and Nágpur. The assessment of the land-revenue has been as follows:—

1815.	1816.	1817.	1820.	1823.	1828.	1833.	1840.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
3,671	4,260	4,357	5,781	6,422	6,821	6,948	6,788	7,886

The records of the current settlement show that there were then (1864) 225 estates comprising 374 villages and containing a total assessable area amounting to 8,875 acres, of which 7,361 were cultivated. The mill-rent yielded Rs. 665 and the land-tax Rs. 7,366, of which Rs. 303 were alienated in *gúnth* and *mudfi*, the whole falling at Re. 0-13-3 per acre on the total assessable area and at Re. 1-1-0 per acre on the cultivation. The population in 1841 numbered 9,824 souls, of whom 4,310 were females; in 1853, 15,541 (7,631 females); in 1858, 16,880 (8,131 females); in 1872, 21,454 (10,606 females) and in 1881, 25,692 (12,839 females). Mr. Batten has the following remarks on this parganah:—

Parganah Badhán or Badhúngarh is divided into two portions by the Pindar river. Patti Pindarpár reaches to the very base of the snowy range and has some five villages within a short horizontal distance of some of the highest peaks near the sources of the Kailganga and Nandákini rivers. The best villages are not found in the valley of the Pindar; and considering the facilities for irrigation afforded by nature, it is remarkable how very little *talaon* or lowland occurs

under the head of irrigated. The finest villages are those either situated, like Kob, on high upland near the forests, but possessing a large share of flat or easily sloping land or placed, like Wan, very near the regions of eternal snow, but surrounded by good pastures enjoying a bracing climate, and inhabited by an enterprising and Bhotiya-like race of trafficking people. There are not many *thokdars* in Badhán, but those that exist are chiefly descendants of persons to whom military assignments of land were given under the former Governments. Occupant *samindars*¹ are generally the descendants of those whom the *thokdars* induced to settle on their grants of land : on this account the latter are sometimes found recorded by the villagers themselves as proprietors of the soil, even where not the slightest possession, or *str* cultivation on the part of the *thokdars*, exists ; but in most instances the occupants claim the nominal proprietorship, although they are willing to pay the customary dues called by them sometimes *malikána*, sometimes *nazarána*, sometimes *hak samindári* and sometimes, indeed generally, *hak thokdári* to the *sayána* or *thokdár*. As, however, these dues are very small, and as no rent in addition to their quotas of revenue is taken from the occupants, it is really a matter of little consequence whether from ignorance, or fear, or from a hope of throwing the responsibility of revenue payment on the more powerful members of the community in case of any future hardship, the people have recorded the *thokdars* and their brethren as shareholders ; or whether under a suspicion of probable usurpation or exaction, or a knowledge of their own rights, the people have insisted on their own proprietary tenure.

The Badhán Rajpút or Khasiya, is, in general, a plain, simple-minded character : and though in this parganah there have been two or three instances of excessive litigation among the brethren of the *thokdári* families, and on the subject of some of the larger padhánships, still the people on the whole are more acquainted with the barter price of salt at Níti and of the money price of wheat and rice at Almora, than with the theoretical tenures of their land—on which subject they, as well as the Bhotiyas not, unfrequently referred the settlement officer to their wives for information. Sheep and goats are extensively kept for the Bhotiyn

¹ Here and elsewhere, unless expressly mentioned in connection with the tenure called *samindári*, the word *samindár*, in accordance with hill usage, is used to represent the actual occupant of the land or shareholder.

traders of Níti and Mána. The rocks in this parganah are similar to those in Painkhanda, except that there is a greater proportion of lime-stone, which formation characterises some of the high-peaked mountains south of the Pindar river. Iron ore is not unfrequent and is here and there worked for local wants.

Badrináth, a peak in parganah Malla Painkhanda of British Garhwál, also a village, temple and collection of rest-houses on the route from Srinagar to the Mána pass, 25 miles south of the latter and 55 north-east of the former. The village is situate on the right bank of the Vishnuganga, a feeder of the Alaknanda, in the middle of a valley about four miles long and one broad and is equidistant from two lofty mountains, the Nar and Náráyana Parbat, one rising to the east and the other to the west. The bank on which it stands is sloping, that opposite is bolder, its brow being on a level with the top of the temple of Badrináth or Badrináryan, an incarnation of Vishnu, situate in the highest part of the village and rising between forty and fifty feet from the ground. The temple lies in north latitude $30^{\circ}-44'-29''$ and east longitude $79^{\circ}-32'1''$, at an elevation of 10,284 feet above the level of the sea. The name is said to be derived from the sacred '*badari*' or jujube, which however, does not grow here. Madden suggests the spiny *Hippophas salicifolia* or a derivation from '*bhadra*,' 'fortunate,' 'auspicious': but there is little doubt that the derivation from the jujube is correct. The building said to have been erected some 800 years ago by Sankara Achárya is of conical form with a small cupola covered with plates of copper and surmounted by a gilded ball and spire. The original establishment is reported to be of very great antiquity; the present temple has however a modern appearance, several former ones having been overwhelmed by avalanches and an earthquake having shaken the present erection so seriously as to render necessary an almost entire restoration. The body of it is constructed of flat stones, over which is a coat of fine plaster which, while adding to its neatness, detracts from the appearance of antiquity. A short distance below the temple is the Tapta kund, a tank about thirty feet

Hot springs.

square and covered with a roof of planks supported on wooden posts. It is supplied from a thermal spring by means of a subterraneous communication terminated by a spout in the form of a dragon's head. A thick smoke

or steam of a strong sulphurous smell is sent forth by the water, which is so hot as to be scarcely endurable to the touch until the temperature is reduced by the admixture of cold water from another spring. In this manner a bath is formed in which the sexes bathe indiscriminately. The ablution accompanied by due adoration of the idol and liberal fees to the attendant Brahmans is considered so efficacious in cleansing from past offences that in ordinary years some five to ten thousand pilgrims visit the shrine and every twelfth year at the *kumbh-melá* the number is increased four-fold. The pilgrims assemble at Hardwár and as soon as the fair there is closed towards the middle of April, proceed on their round of pilgrimage in the mountains by Deoprayág, Rudrprayág, Kedárnáth, Badrináth and home by Nandprayág and Karnprayág. The entire tract here is known as Vaishnava-kshetra, which is subdivided into twelve subordinate *kshetras* or tracts. Besides Tapta-kund, in which Agni resides by permission of Vishnu, there is a recess in the bed of the river forming a pool called Nárada-kund. This is sheltered by a bare rock whose projecting angle breaks the force of the current and renders the place fit for bathing. A little to the left is the Suryya-kund, another thermal spring proceeding from a fissure in the bank. There is no reservoir here and the pilgrims catch the water in their hands and throw it over their bodies. Besides this there are the Brahm-kapáli and other reservoirs which are reported to possess various virtues and form part of the twelve *kshetras* visited by pilgrims. The principal temple is called Ráj-badri and with four others connected with it is well known as the Panch-badri, *vis.*:—Yog-badri, Pándukeswar, Brid-

The idol.

dhbadri at Animath and Kapál-badri or Bhavishya-badri at Subhai, where there are also thermal springs. The idol in the principal temple is formed of black stone or marble about three feet high. It is usually clothed with rich gold brocade and above its head is a small mirror which reflects the objects from the outside. In front are several lamps always burning and a table also covered with brocade. To the right are the images of Nar and Náráyana and on the left those of Kuvera and Nárada. The idol is adorned with one jewel, a diamond of moderate size, in the middle of its forehead, whilst the whole of the properties, including dresses, eating vessels and other

paraphernalia, are not worth more than five thousand rupees. The idol Nar-sinha at Joshimath is said to have one arm which daily grows thinner, and when it falls off the road to Badrináth will be closed by a landslip and a new temple erected at Bhavishya-badri near Tapuban, also known as Dákhtupan, or, as some say, at Ad-badri in Chandpur. A good deal of ostentatious attention is paid to the personal comforts of the idol at Badari. It is daily provided with meals which are placed before it, and the doors of the sanctuary are then closed and the idol is left to consume its meals in quietness. The doors are not opened again until after sunset, and at a late hour, its bed being prepared by the attendants, the doors are again closed until morning. The vessels in which the idol is served are of gold and silver and a large establishment of servants is kept up both male and female, the latter as dancing-girls and mistresses of the celibate priests. The only persons who have access to the inner apartments are the servants and no one but the Ráwal himself is allowed to touch the idol.

The temple is closed in November and the treasure and valuable utensils are shut up in a vault beneath the shrine and every person descends to Pándukeswar and Joshimath. As a rule from November until the end of May the temple is covered by snow. Once some plundering Garhwáls made their way across the snows in winter and removed some 90lb. weight of gold and silver vessels, but they were seized and punished by the Garhwál Government. The Rájás frequently made use of the temple property, giving villages in mortgage in exchange which were never redeemed. At the Gorkháli invasion, the Rája borrowed Rs. 50,000 as a loan, and from this and other sources the temple possesses an endowment of 226 villages in Kumaon and Garhwál which as early as 1824 yielded a revenue of over Rs. 2,000 a year. At the same time many of these villages are large and populous and could yield a far greater rent; but the rents were fixed at the time of the grant either in money or in kind in perpetuity, and as many of the cultivators were Brahmans, the outturn is small compared with the area. In 1864, the Garhwál endowments alone comprised 4,372 *bísis* of assessable land yielding a land-tax of Rs. 8,943 distributed over 262 villages, and in Kumaon some 1,674 *bísis* in plots of 10 *bísis* or more distributed over 69 villages.

As the annual expenditure sometimes exceeds the income of the year from offerings and endowments, recourse is had to loans to be repaid from the surplus of favourable years. The offerings consist of *bhet* or offering to the idol, *bhoy* or for the expenses of his food and clothing and *nazarána* or gift to the Ráwal. Of late years the affairs of the temple have been so badly managed that it is always in debt, though if properly controlled the revenues are sufficient for all proper expenditure. The ceremonies to be performed by pilgrims are simple in the extreme, consisting of a short service with a litany and bathing and in the case of orphans and widows in shaving the head. The principal priests are Namburi Brahmans from Malabar and the head-priest is called Ráwal. In order to provide for the succession, in case of the illness or death of the Ráwal, a *chela* of his caste is always in attendance at Joshimath, so that there is always a Ráwal elect present to take possession of the office. The Ráwal has a regular establishment to manage the temporal concerns of the institution and under the former Rájas exercised supreme and uncontrolled authority in the villages attached to the temple. Formerly the priests were supposed to live in perfect celibacy, but now they excuse themselves that they have broken with all home ties. A teacher is employed who conducts the school for the children of temple employees, and in 1873 a dispensary was established the cost of which is borne from the *saddábat* funds, and it remains open as long as pilgrims attend. In ordinary years the pilgrims are chiefly Jogis and Bairágis and the offerings amount to about Rs. 5,000, but at the *kumbh* and *adh-kumbh*, or every twelfth and sixth year, the numbers of pilgrims and receipts are greatly increased. West of the temple about twelve miles is the group of snowy peaks called Chaukhamba or Badrináth, six in number, three of which have an elevation above the sea respectively of 22,395, 22,619 and 22,901 feet. Six miles to the south-west is a summit called Nalikanta having an elevation of 21,713 feet. See MANA; BHOTIYA MAHALS. On the way to the Satopant lake and glacier there is a water-fall called Basodhára, to which is attached the legend that when seen by an impure person it ceases to flow. The Bhotiyas say that when Kumaon was invaded by the British, the Rája proceeded to invoke the aid of Badrináth, but when he

came to Basodhára, the water-fall ceased to flow and they then knew that the Rája would cease to reign. The lake near the Satopant glacier has three corners each with a different name and is to the Bhotiyas a Ganges into which the ashes of their people collected at the funeral-pyre are thrown. It, too, has its legend that it is fathomless and that no bird can fly across it. The Bhotiyas present offerings to the spirit of the lake to keep the passes open and aid them in their dangerous journeys, and as they themselves are denied entrance into the Badrináth temple, it has for them all the virtues of Badrináth itself.

Bágeswar, a village in Patti Talla Katyúr, and parganah Dánpur of Kumaon, is situate at the junction of the Sarju and Gomati rivers some 27 miles north of Alinora. The name¹ is derived from the temple which is dedicated to '*Vák-invar*', 'the lord of speech', or according to others '*Vyághreswar*', 'the tiger-lord'. The population numbers about 500 occupying a few streets of substantially built houses on the right bank of the Sarju. Bágeswar is the great mart for the exchange of Tibetan produce between the Bhotiyas and the Almora merchants and entirely owes its prosperity to British influence. It is only occupied for trade from the middle of November until the end of April. Three fairs of a semi-religious character take place: the principal, known as the *Uttaráyini* or *Utraini*, is held about the twelfth of January, when goods to the extent of three lakhs of rupees change hands. The present temple was erected by Rája Lachhmi Chand² about 1450 A.D.; but inscriptions noticed elsewhere show a far earlier foundation³. Certain tombs constructed of large tiles⁴ discovered in the neighbourhood and at Dwára Hát have been assigned to Mughal colonies and attest, perhaps, the presence of a non-Hindu race.

Traill writes:—"These tombs differ both in form and appearance from the graves of Jogis, the only class of Hindus which adopts sepulture. It is therefore to Tatars or Muhammadaus only that these graves can be ascribed. The extreme sanctity of Bágeswar, a principal '*prayága*' or confluence and place of pilgrimage, precludes the supposition that either of these sects would have been

¹ Gaz., XI., 317.
see BHOTIYA MANUALS.

² *Ibid.*, 555.

³ *Ibid.*, 409.

⁴ *Ibid.*, 513

suffered as subjects of a Hindu Government, to pollute that place with their dead, while the Muhammadans, as is well known, were never able to effect any conquests within these hills. By the natives these tombs are called Mughali. The Dárma Bhotiyas, who are also said to be descendants of a colony left by Tímúr from the association of the Muhammadan creed with the name of Mughal, repel as an insult the extraction attributed to them. The Sarju is crossed by a new iron wire suspension bridge of 147 feet span and the Gomati by a similar one of 60 feet span ; both the old bridges were washed away in 1871, but have since been replaced. Elevation above the sea 3,143 feet : latitude $29^{\circ}50'15''$; longitude $79^{\circ}48'52''$.

Bágeswar is approached from Almora by two roads, one passing through Tákula and the other by Binsar.

Roads.

Roads connect it also with Someswar on the Kausáni road, Baijnáth on the road to Karnprayág, Kháti on the road to the Pindar glacier and Milam and Thal on the road to Askot. The road from Tákula starts from the village of that name 12 miles from Almora and 14 miles from Bágeswar, from an encamping ground near the clump of *deodars* surrounding its old temples, and ascends to a pass leading across the Jammarkhet ridge, the peak of which rises on the right to a height of 6,837 feet, thence descending the road winds along a narrow

From Almora.

thickly wooded valley to the ascent to the outlying spur from Gananáth (6,947 feet), near which there is a temple and a road made of steps of flag stone from the neighbouring quarries which leads almost in a straight line up the hill. This was constructed by the piety of an Almora trader, but is little used as the new road is much more easy and even shorter. Thence an ascent is again made to the west of the Jarnuli peak (6,200 feet high) and thence into the valley of the Sarju, where the road from Tákula is joined by the Binsar road and passing by Khabilikhet, Bágeswar is reached. This march is fairly diversified by hill and valley, heat and shade, and affords some pretty bits of scenery. The road from Binsar keeps to the eastern side of Jammarkhet, passing by Panchdeo, Ukháli and other villages lying near the Gat-gadh stream and eventually joining the Tákula road, where it enters the Sarju valley.

The road from Someswar passes up the valley of a small feeder of the Kosi by the villages of Mahargaon, Baisargaon, Nákot and the Karkeswar temple to the Pápi ridge forming the watershed between the Sarju and the Kosi, whence the road is undulating to Bágeswar. Someswar is about twelve miles from Bágeswar and the Pápi ridge lies about half way. The road from Baijnáth to Bágeswar lies along the left bank of the Gomati river from Baijnáth to the confluence with the Sarju, a distance of twelve miles and is very low and hot the entire way. There are however a few pretty reaches in the river known locally as *tdls* or lakes which abound with fish of all the common kinds. The road to Askot by Thal runs nearly due east by Halkána and Dhupaulá Sera to Sunudiyár, where there is a tea-planter's bungalow. Another sheep track leading east follows up the valley of the Pungor-gádh, in addition to which most of these roads are connected with each other by tracks across country passable for men but not for ponies. The main roads are excellent and are open at all times of the year for men and animals. During the winter months all these roads are crowded with flocks of goats and sheep conveying borax and salt from Bhot and grain and rice in return, while numerous parties of lowlanders are seen carrying *kiltas* of oil which they exchange in Bhot for wool. The trade returns are noticed under 'trade' in the article KUMAON.

From Bágeswar upwards the bed of the Sarju narrows and forms more a gigantic ravine than a valley, the entire floor being frequently occupied by its bed. This channel is exceedingly deep and in many places forms dark pools abounding in fish. In places the mountains rise precipitously on either side, so that the road to avoid the cliffs has sometimes to make a considerable rise where it cannot be carried along the face of the cliff. On the right bank large torrent-feeders of the Sarju are crossed: one (the Lahor) about three miles, a second called the Kanálgadh at about seven miles and on the left bank the considerable stream of the Pungor-gádh. Within two or three miles of Kapkot the valley opens considerably and gives place to several stony and uncultivated dells covered with dwarf

Zizyphus (badari). The glen around Kapkot itself is highly cultivated, yielding fair crops of rice and *manduwa* (*Eleusine coromana*). It is about one and a half to two miles long and about half as wide, with an elevation of from 4,000 to 4,500 feet above the level of the sea, enclosed by a belt of gently swelling and diversified mountains covered with a beautiful vegetation, the *chir* pine (*Pinus longifolia*) feathering the summits. The village is on its western edge close under the slopes of Dioli (5,471 feet) about 150 feet above the river and half a mile from it. Several smaller hamlets are scattered over the valley, each with its grove of trees, among which the plantain attains a fair size and produces large and excellent fruit. On the right bank the Chirpatkot peak (6,637 feet) appears and up the glen the snowy range, conspicuous amongst which is the peak of Nandakot (22,533 feet) with its summit white as a new pál or servant's tent, to which it bears a strong resemblance. The picturesqueness of the scenery is no doubt in a measure due to the limestone which from Bágeswar to Kapkot forms the most important rock.

Here a gradual change in the character of the vegetation may be seen. The *Oriyanum* and *Cratægus pyracantha* (*gingáru*), or white thorn, replacing the dwarf date palm found near Bágeswar. The *tejpát* (*Cinnamomum Tamala*), called *kirkiriya*, abounds in the shady glens. The *Didymocarpus macrophyllus*, *Loxotis obliqua*, &c., cover the dripping rocks, a flesh-coloured *Argyrea*, and the *Cucumis Hardwickii*, (*airálu*) climb over the bushes with *Tricosanthes palmata* (*indráyan*) and its brilliant red but fetid fruit. *Coix lacryma* (*lúchnishu*) or Job's tears grows by every stream and in several places *Eginetia indica*. *Osbeckia angustifolia* is abundant in the grass and *Clerodendron serratum*, and *siphonanthum* and *Bæhmeria tenacissima* (*poi*) amongst the thickets. *Abelmoschus pungens*. (*hou*, *kapasya*) grows in abundance on the damp shaded slopes. The more common trees are the *Photinia dubia* *Quercus annulata*, *Kydia calycina* (*puta*), *Ehretia serrata* (*púniya*), *Ougeinia dalbergioides* (*sanán*), *Terminalia bellerica* (*bahara*), *Woodfordia floribunda* (*dhdí*), *Flemingia semialata*, *Wendlandia cinerea*, *Callicarpa macrophylla* (*gaiwali*), *Saurauja nepalensis* (*goganda*), *Engelhardtia Colebrookiana* (*maná*), *Bauhinia variegata* (*kwaird*) and *Bauhinia retusa*, Roxb. (*kindla*), and a species of *Sapium* named *phútkiya* (Madden)

There is a fine grove of *silang* trees (*Olea fragrans*) here which flower in September.

Bagoli, a halting-place and village on the road from Karnprayág to Bágeswar in Kumaon in Patti Sili Chandpur of parganah Chandpur in Garhwál, lies in latitude $30^{\circ}-11'-50''$ and longitude $79^{\circ}-21'-1''$: distant 8 miles 6 furlongs 11 poles from Karnprayág and 10 miles 4 furlongs 35 poles from Panthi, the next station before Jolabagr. The road to Bagoli from Karnprayág winds along the left bank of the Pindar river with precipitous hills on either side. At Simli (4m. 2f. 23p.), where it meets the road from Almora, by Lobha it crosses the Bharrárigár, which here joins the Pindar. Thence by Chalakot Rathora and Kulsann to Bagoli (4m. 3f. 18p.) From Bagoli to Panthi the road continues along the same side of the river, crossing to the right bank near Nalgaon and recrossing at the Náráyanbugr bridge, somewhat undulating. Thence to Panthi Bhagwán the road is fairly level. The Pindar valley scenery all through from its source to its confluence with the Alaknanda at Karnprayág is most picturesque and almost in every mile has some beautiful bits where wood, water, forest, hill and rocks vie with each other in contributing to the general *abandon* of nature here visible.

Bajjirau, a halting-place on the route between Kainur and Rámnagar, is situated in Patti Sábali of parganah Mallá Sálá in Garhwál in latitude $29^{\circ}-55'-0''$ and longitude $79^{\circ}-4-41''$: distant 10 miles 7 furlongs 21 poles from Kuinúr and 9 miles 7 furlongs 28 poles from Bhatwára, the next stage. The road hence to Bhatwára crosses the Eastern Nyár by a bridge of 62 feet span to Lachhi, crossing a tributary of the Nyár by a bridge of 57 feet span and thence to Kundi, 2 miles 0 furlongs 20 poles. Hence to Kakrora, Rikhár and the Bináyuk-khál at Domaila, 4 miles 3 furlongs 8 poles. From Domaila the road crosses the Khátali-gadh by a bridge of 72 feet span, descending for a mile and a half and again ascending to Bhatwára encamping-ground in large open fields 3 miles 4 furlongs.

Bajjnáth, a village in patti Malla Katyúr and parganah Dánpur of the Kumaon district, lies in north latitude $29^{\circ}-51'-24''$ and east longitude $79^{\circ}-39'-28''$, at an elevation of 3,545 feet above the level of the sea (temple). The river Gumti (Gomati) flows close to the

village, which is $12\frac{1}{2}$ miles from Someswar, 12 miles from Bágcswar and about $12\frac{1}{2}$ miles from Jolabagr on the Nandprayág road, with each of which it is connected by a good road. Baijnáth in 1881 had a population of 117 souls. There is a large Hindu temple here sacred to Káli situate in the old Ranchula fort, of which the altar is said to be constantly moist with the blood of kids and buffalo calves sacrificed to the dread goddess of destruction, still, however, called 'mái' or mother. There are several old temples of the Turk's cap style, most of which are in ruins and are used as corn lofts and store-rooms as in Dwárahát. A colony of Gosáins are established here, who observe the custom of burying their dead in small temple-like tombs around the building in which they worship. Along its walls are old sculptures collected from different places, most of which are of modern Hindu origin; but one is clearly a representation of Buddha and must have belonged to a temple of that creed which flourished here in the eighth century of our era according to Hwen Thsang. Baijnáth is interesting as being in the centre of the Katyúr valley, the home of the ancient Katyúris. On all sides the valley is studded with tea-plantations where twenty years ago were only the haunts of tigers and bears.

Bairaguna (or Bhairongana), a halting-place on the route between Hardwár and Srínagar by the Lachhman-jhúla bridge, distant eight miles 11 poles from the former stage and 12 miles 32 poles from Chandpur-ke-manda, is situate in the Hinwal or Hinwal valley in Patti Udepur Talla of parganah Ganga-Salán in Garhwál in latitude $30^{\circ}-3'-40''$ and longitude $78^{\circ}-25'-30''$. The road from Hardwár passes by Ránípokhri and Lachhman-jhúla in the Dohra Dún district into Garhwál and thence along the left bank of the Ganges to its confluence with the Hinwal river at Phalári. Hence it follows the left bank of the latter river to Bairaguna, a little over eight miles, slightly undulating the entire way. Hence to Chandpur-ke-manda the road continues up the valley for a short distance to a ford across the Hinwal and ascends by Bijni to Sainduli-khál, (6m. 3f. 7p.) Thence a descent of half a mile leads to Bandarbel dharmaśla and a level march of one mile and ascent of half a mile to Dhángugarh (3m. 5f. 18p.) The road descends from here for about quarter of a mile and is level along the Ganges to Chandpur, 2 miles 7 poles from Dhángugarh.

Balchha, a pass into Hundes or Tibet, is situated in Malla Painkhanda of Garhwál in latitude $30^{\circ}47'-20''$ and longitude $80^{\circ}12'-45''$. The Balchha pass is reached from the Untadhúra pass to the north of Milam in parganah Juhár of Kumaon and was crossed by Messrs. Winterbottom and Strachey in their expedition to Tibet and also by Captain Weller, an account of whose journey is given here. Weller crossed the Unta-dhúra and went on to the Balchha pass (29th May). He descended the northern slope of Unta-dhúra for half an hour over one unbroken bed of snow. Thence a moderate descent of one hour, over snow-beds cut into most troublesome ridges by the wind, to the Lanka stream, continued for an hour along its bank over snow-beds and bare hills, then turned to the west and after a bad descent in snow and slush reached Topi-dúnga. At the turn, the Lanka also bends westwards and is joined by the Doldunkhar stream from the east. Topi-dúnga is a small level spot on the left bank of the Lanka, which here has a depth of about 3 feet and a width of about 20 feet. A shepherd and his flock are said to have been snowed up here for a whole winter. There is a little herbage at Topi-dúnga and further west, grass and low brushwood (on the opposite side) are tolerably plentiful. The Dol rises in the Jandi glacier on the western face of the Kingri-bingri ridge, which here separates Garhwál from Tibet and flows westwards to its confluence with the Lanka. The united streams then receive on the left bank the Torgár coming down from the south-east by south. The junction is curious as the two flow nearly parallel for some hundred yards; the Torgár along the top and the Lanka along the base of a precipice which may be 450 feet high at the highest part and diminishes to nothing at the junction. Thus reinforced the Lanka becomes the Girthi stream of the maps (*q.v.*)

The encamping ground at Topi-dúnga has an elevation of 14,830 feet and one on the left bank of the Lanka near its confluence with the Doldunkhar an elevation of 14,640 feet above the level of the sea. From this descended to the river and passed along it to the east and crossed the Lanka, above its junction with the Dol, stream rapid, but not above knee-deep and some 20 feet wide, wind and snow. Continued up the Dol, chiefly flowing under snow between precipitous banks of rock. Then turned north across the Kálimat-

tiya ascent, very steep and covered with loose stones over a black crumbling slate. The latter part of the ascent less steep. This is the Kiungar pass by the Kiungar peak (17,680 feet). The crest is composed of small loose stones rising in a sweep to the top of the hills on either side; beyond a good extent of valley and low hills covered with brush-wood rises the Balchha ridge. Hence to Chidámu encamping-ground (13,520 feet) by a descent due north over alternate snow-beds and loose stones from the ridge on the east. The track is here bounded east and west by bare ranges with a small stream flowing north in the hollow between them chiefly under snow beds. The hills on either side are perpetually crumbling away, accumulating immense heaps of loose stone along their bases. Chidámu is a small level spot on the right or east bank of the stream above noted, which is here joined by another stream from the east. The streams unite near Laphkhel to form the Kiogadh, a tributary of the Girthi. Just north of Chidámu, across the stream, a succession of low hills commence, extending northwards to Laphkhel. These are covered with the goat-thorn or *damá* (*C. Pygmæa*) and the hollows afford good pasturage. Looking from the south the southern face of hills and ravines hardly bear a trace of snow, whilst the northern aspect of those of similar elevation are thickly covered with snow.

From Obidámu the track passes along a succession of low hillocks to the Kiogadh, on the right bank of which is the Laphkhel or Laptel encamping ground (13,990 feet). Hence a track leads up the Kiogadh by the Chaldu pass (17,440 feet) and also by the Chirchun pass (17,960 feet) into Tibet, meeting the track from Unta-dhúra by the Kingri-bingri pass (18,300 feet) at the Chirchun (Chitichun) encamping ground in Tibet (16,130 feet). Where crossed near Laphkhel the Kiogadh was a rapid torrent thirty to forty yards wide, but usually passable by laden sheep. The encamping ground is a few hundred feet above the river shut in by an amphitheatre of low hills which form the base of the low ridge crossed on passing into Tibet. The goat-thorn is tolerably abundant and in early June the hollows are covered with young grass, forming a favourite pasturage ground. The *salagrá*m stones abound here. Hence one track leads to the Shelshel pass on the west (16,390 feet) and another to the Balchha pass (17,500 feet). The

first stage is to Sangcha encamping ground (14,110 feet); first northwards up a gentle ascent or two and then west over undulating ground, sometimes bare and sometimes covered with *dama* and rills of water giving nourishment to grass in all the hollows. The breadth of this tract is about two to three miles and it ends in the ascent to Balchha. From Sangcha the track leads north-east to the bank of a northern affluent of the Kiogadh. This is joined by numerous streams on either side and is divided near Talla Sangcha into two streams, one coming from the north and the other from the north-east, up which lies the route to the pass. The hills on either side are of inconsiderable height, bare, precipitous and crumbling, but towards the foot of the pass they open out a little and have a few thorn bushes on the slopes and where the surface is abraded it is of a brick-dust colour. On the summit is a small heap of stones with sticks and rags attached to them, to which the natives add a stone or two as they pass. The view northward from the summit of the pass is thus described :—" Instead of a plain which I had expected to see, the country of Tibet is formed of alternate low hills and table-lands with a range of higher hills well sprinkled with snow in the distance running north-west to south-east." Though at the time of his visit (the second of June) the weather was mild, this was represented to be unusual and the wind and cold were stated to be for the most part dreadful.

The Jhanka stream rises from the northern slope of the pass and has a direction north and a little west. This is joined by a stream coming from past Chirchun and the two united form the Trisum, a good-sized river flowing to the north-west. The view from the pass was contracted by the slope of the hill east and west just in front and by the distant haze, no vegetation was visible.

Balchha, a pass on the frontier separating Tihri from Bisáhr, lies over a crest of the ridge separating the valleys of the Tons and Pábar or Pábhara in Patti Bangarh and parganah Rawáin. The pass has an elevation of 8,898 feet above the level of the sea and the ridges on each side are thickly clothed with *deodár*.

Balchha Ghat, a ferry across the Káli river in parganah Shor of the Kumaon district, is situated 12 miles east of Champáwat and 19 miles south-east of Pithoragarh. Latitude $29^{\circ}-17'-40''$, longitude $80^{\circ}-20'-55''$.

Bamsu, a patti of parganah Nágpur in British Garhwál, is bounded on the north and east by Káliphát Malli; on the south by Káliphát Talli; and on the west by Tihri. The road from Rudrprayág to Kedárnáth proceeds northwards along the left bank of the Mandákini river. The patwári of Malli Káliphát, usually resident in Guptkáshi, collects the land-revenue of this Patti, Maikhanda and Parkandi also. The principal villages are Bhairgaon, Dewáli, Lamgaondih and Semali. The entire Patti is held as *sadábart* and its revenues are administered by a local committee.

Band or **Bund**, a patti of parganah Dasoli in British Garhwál, comprises a small triangular patch of mountain land on the left bank of the Alaknanda river near Pipalkoti. It is held in *sadábart* and is administered by the local committee. It was formed from Dasoli in 1864 and the Patwári of Dasoli Talli, usually resident in Nandprayág, still collects its revenue. The principal village is Bairagna, where there is a school. There are copper mines at Bantoli in this Patti, but they are not now worked.

Bandarpunchh (or Bandarpunchh, 'the monkey's tail'), a mountain mass forming a collection of peaks known as the Jamnotri peaks in the records of the Great Trigonometrical Survey. Three peaks are laid down in the maps as Srikánta, 20,130 feet; Bandarpunchh, 20,758 feet; and Jamnotri, 20,038 feet.

Fraser writes:—"As seen from the south-west two lofty and massive peaks rise high above the rest, deep in snow, from which all the other inferior ridges seem to have their origin. These peaks are connected by a sharp neck, considerably lower than themselves. The south and south-east exposure is the least steep, and bears a great depth of pure unbroken snow. Little or no rock is seen, except a few points at the ridge of the connecting neck, where it is too sharp and steep for snow to lie; and there it appears of a red colour. Here and there lofty precipices are seen in the snow itself, where the lower parts have melted, and masses have given way and slidden down to the ravines below, leaving a face several hundred feet high, that shows the depth of snow which has accumulated for ages. The name of Bandarpunchh properly applies only to the highest peaks of this mountain: all the subordinate peaks and ridges have their own peculiar names. Jamnotri has reference

only to the sacred spot, where worship is paid to the goddess and ablution is performed. According to native accounts there are said to be our peaks which form the top of Bandarpunchh, only two of which are seen from the south-west and in the cavity or hollow contained between them tradition places a lake or tank of very peculiar sanctity. No one has ever seen this pool, for no one has ever even attempted to ascend any of these peaks. Besides the physical difficulties the goddess has especially prohibited any mortal from passing that spot appointed for her worship."

The landholders aver that every year, in the month of Phāgun, a single monkey comes from the plains, by way of Hardwar, and ascends the highest peak of this mountain, where he remains twelve months, and returns to give room to another; but his entertainment must be very indifferent and inhospitable, as may be inferred from the nature of the place; for he returns in very sad plight, being not only reduced almost to a skeleton, but having lost his hair and a great part of his skin "

The group of hot springs known as Jamnotri is only about 500 yards below the place where the various small streams that unite to form the first waters of the Jumna fall into a basin below. Hence they shoot over the brow of a rock projecting from the snow and pass down where the rocks again close over the stream, and though not so lofty as those below interpose a bar to progress upwards in the bed of the stream. At the place where it is customary to perform ablution the north-east side of the river is very steep and the rocks about here "seem to be quartzose, and chiefly white, but exhibiting different shades and colours. The structure is laminous, and from between these laminæ run several small streams of warm water, forming together a considerable quantity. There are several other sources in which the water bursts up with great ebullition, and one in particular, from which springs a column of very considerable size, is situate in the bed of the river between two large stones, and over it falls a stream of the river water. This water has a temperature of 194.7° , nearly that of boiling water, at an elevation of 10,849 feet above the level of the sea, and emits much vapour. The water is exceedingly pure, transparent, tasteless, and devoid of smell. A great quantity of red crust, apparently deposited by

the water, which seemed to be formed of an iron oxide, and some gritty earth, covers all the stones around and under the stream. This, on exposure to the air, hardens into a perfect but very porous stone, whilst below the water it is frequently mixed with a slimy substance of a very peculiar character, of a dull yellowish colour, somewhat like isinglass, certainly a production of the water as well as the above crust, for it covers the stones over which the stream runs, and is very abundant."

The violence and inequality of the stream frequently changes the bed of the river. Formerly it lay on the side opposite to this rock, and the numerous sources of this warm water were then very perceptible, many of them springing from the rock and gravel to some height in the air, but several of these are now lost in the present course of the stream. These warm springs are of great sanctity, and the spot for bathing is at that point before mentioned, where one of a considerable size rises in a pool of the cold river water and renders it milk warm. This jet is both heard and seen, as it plays far under the surface of the pool. These springs have all particular names, such as Gaurikund, Taptakund, &c., and, as usual, a superstitious tale is related concerning their origin. Thus it is said that the spirits of the Rishís, or twelve holy men who followed Mahádeo from Lanka (after the usurpation of Ráwan) to the Himálaya inhabit this rock and continually worship him. (J. B. Fraser's Journal, pp. 418—430; As. Res., XIV., 395; *Ibid.*, 324, 327.)

Banelsyun, a patti of parganah Bárabsyún of British Garhwál, is bounded on the north by pattis Kandwálsyún and Sitonsyún; on the south by the Nyár river, separating it from parganah Ganga Salán; on the east by pattis Manyársyún and Gangwársyún and on the west by the river Ganges. In 1864 three villages were received from Kandwálsyún and five from Manyársyún. The patwári of this Patti, usually resident in Maklari, collects the land-revenue of Patti Kandwálsyún also, both, in 1861, aggregated Rs. 2,300 for land-revenue and *sadábart* and Rs. 158 for *gúnt* paid by 51,82 souls. There is a school at Khola. The patti comprises the lands lying between the Nyar river on the south and the Randi river on the north, both affluents of the Ganges. The principal villages are Byaughát, Naugaon, Tari, Maklari, Khola, and Enjyúngaon.

Bangársyún, a patti of parganah Malla Salán in British Garhwál, is bounded on the north by Choprakot and Dhaundyálsyún; on the east by the latter patti and Meldhar; on the south by Sábali, and on the west by Taláin. The principal villages are Sukhai and Joi on the Kainúr road; Baijiran, where the roads from Rámnagar to Kainúr and Almora to Páori cross the eastern Nyár by a bridge; Siloli and Hainsa. In 1864, Kunuliya was transferred to Dhaundyálsyún. The patwári of Choprakot, usually resident in Kanyúr, collects the land-revenue of this patti also. The eastern Nyár runs from north to south through the patti, which is sparsely inhabited and of little importance.

Bangarhsyún, a patti in parganah Bárahsyún in British Garhwál, is bounded on the south by pattis Kandwálsyún and Sitonsyún; on the north and west by the Ganges, and on the east by pattis Ráwatsyún and Idwálsyún. The patwári of Ráwatsyún, resident at Marguna, collects the revenue with that of Patti Sitonsyún. This patti comprises a small strip of land lying along the left bank of the Alaknanda and traversed by the Hardwár and Srinagar road. It contains the villages of Káandi Bidyakoti, and Kolású.

Bánjbugr, a resting-place on the route from Nandprayág on the Alaknanda to Baijnáth on the Gumti, is situated in patti Nandák and parganah Dasoli of British Garhwál, distant 14 miles from Nandprayág; 12 miles from Náráyanbugr, where the Pindar is crossed by a bridge, and 11 miles from Dúngari on the right bank of a tributary of the Pindar. The journey from Nandprayág is often broken at Ghát, 10 miles from Nandprayág; and here too the road to Rámni branches off. From Nandprayág the road to Bánjbugr follows the left bank of the Mandákini river and is bridged throughout where necessary. It is gently undulating without any steep or difficult ascents. Chintoli village lies half way and besides this the villages of Mahar Bagti, Ráj Bagti, Gandásu, and Nágbugr lie on the right bank of the river. Thirpao and Chintoli are the only villages on the left bank. The scenery in parts is very picturesque and the hills well covered with forest. From Ghát to Bánjbugr the valley contains some bits of the prettiest scenery in Garhwál. At Bánjbugr the road to Náráyanbugr turns off to the right and that to Dúngari to the left.

Báns, a halting-place with bungalow on the road from Almora to Pithoragarh, lies in north latitude $29^{\circ}36'-44''$ and east longitude $80^{\circ}11'-5''$; in Patti Seti Talla of parganah Shor in Kumaon, distant $48\frac{1}{2}$ miles from Almora and $7\frac{1}{2}$ miles from Pithoragarh. The traveller's bungalow is in charge of a watchman and there is also a baniyá's shop. The road from Shor ascends the hill to the north-west of the Shor valley by an easy ascent of about 1,500 feet and enters a remarkably wide and open valley thickly studded with villages, amongst which Chhána and Bhúmuna are noted for their oranges. The stream draining this valley flows into the eastern Rámanga on its left bank, where it is crossed by the iron suspension bridge. On the north the peaks of Iriárikot (6,884), Asur-chula (6,990), and Bhúmuni (5,728 feet) run from east to west to the Rámanga; on the east the ridge dividing it from the Shor valley attains a height of 6,898 feet, and on the south the water-shed above Pábhe has an elevation of 5,775 feet above the level of the sea.

Bárahmandal, a parganah in Kumaon, contains seventeen Pattis, each of which is separately noticed, viz. :—Bisaud Malla, Bichhla and Talla; Boráru Palla and Walla; Dwársaun, Kairáru, Kálígár, Kháspurja, Uchyúr, Ryúni, Syónara Malla and Talla, Tikhún Malla and Talla and Athágúli Palla and Walla. These comprise 519 maháls or estates containing 601 villages. The land tax has been assessed thus :—

1815.	1816.	1817.	1820.	1823.	1825.	1833.	1843.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
9,241	10,147	11,073	14,767	16,950	16,896	17,328	18,075	36,833

The current assessment falls at Rs. 1-1-0 per acre on the assessable area and at Rs. 1-6-3 per acre on the assessed cultivation. The assessable area comprises 34,724 *bísis*, of which 8,208 are culturable and 26,516 are cultivated (2,840 irrigated). The population at the time of settlement numbered 31,740 males and 28,434 females; in 1872, 67,425 (31,395 females) and in 1881, 60,848 (29,683 females). The exemptions from the land-tax for the support of temples and individuals amount to 1,678 *bísis* assessable at Rs. 3,308 per annum. Besides these 2,948 *bísis* are held in fee simple.

This is the central parganah of the district and contains the capital Almora. It occupies the whole upper basin of the Kosi above the great turn of that river to the westward below Almora,

and also the upper portion of the basin of the Gágá, a tributary of the west Rámanga. Mr. Batten's description of the parganah holds good to the present day :—"The whole tract is richly cultivated and thickly peopled, with the exception of the highest mountains and these are by no means difficult of access, nor do they present any stupendous features in the landscape. The climate of the parganah is for the most part very fair, the height of the villages above the sea varying from 6,000 feet to 3,500 feet, the main valleys however rarely falling to the latter level. Perhaps in no part of the hills can anything more beautiful be seen than the valley of the Kosila in Boraran, especially near Someswar. The mixture of the natural scenery of wood and water, the care-displaying fertility of innumerable fields, and the sprinkled human habitations remarkable for their pretty architecture, make up a picture which it would be difficult to equal in any part of Asia. The cheerfulness and abundance, too visible in the neighbourhood of Almora itself and Hawál-bág, are well known and make up for the absence of grander natural features. It is hardly an exaggeration to say that on the north-west face of the Almora hill from ridge to base there is not a yard of land uncultivated. The cereal grains from the chief productions of the soil, and in Borárau, Kairárau and Athágúli, sugarcane, cotton and linseed are also frequently seen. The two former, however, are not grown as profitable staples, but for home use, nor is there any manufacture of saleable *gur* or other preparations of sugarcane. Throughout the whole parganah, but especially in Malla Syúnara, the fruit of the hill pomegranate (*dárim*) is a most plentiful and valued production, the extracted juice being sold in the bazar as a fine acid, and the outside rind taken in large quantities to the Taráí market under the name of *nasáú*, as an important article in the dyeing and tanning trade. Walnuts, oranges, lemons, and plantains also are very abundant. This orchard wealth is daily increasing, whereas, under the late Government, from the mere wantonness of the Gorkhálí soldiers in cutting down garden wood, the villages were becoming more and more denuded of fruit trees."

Bárahmandal, as its name denotes, originally comprised twelve circles or sub-divisions. As we have seen in the fifteenth century all these sub-divisions were each under its own rája¹. Udyán Chand

¹ Gaz., XI., 327.

in 1420 A. D. reduced the Bisaud and Mahryúri Rájas to submission, and some seventy years later Kíratí Chand completed the conquest of Bárahmandal, driving the Bisaud rája from the remainder of his possessions, capturing Syúnara and colonizing the Bora and Kaira Rans with people of those castes. It was not, however, until 1560 A.D. that Bálo Kalyán Chand¹ founded Almora and removed the Chand capital from Champáwat, giving the tract around the name Kháspurja because it was distributed amongst the immediate followers of the court. Syúnarakot was the old capital of the Syúnara rájas and still shows traces of the fort and the *surang* for supplying the garrison with water. Tikhúnkot was the capital of Tikhún and was founded by a Khasiya of Rankil who was forced to surrender by having the water cut off from his fort. A Chilwál Khasiya was the author of this piece of treachery and received the *kamlínachári* dues of several villages as his reward. The Ryúni people received several privileges as the dándi-bearers of the Chand rájas. Uchyúr was always noted for its soldiers who composed till lately a considerable proportion of every Kumaoni contingent. At Amkholi near Tákula was an old Katyúri city, regarding which many stories still exist : see TAKULA.

Bárahsyún, a parganah in Garhwál, comprises fourteen Pattís or sub-divisions, each of which is separately noticed, viz., Banel-syún, Bangarsyún, Gagwársyún, Idwálsyún, Khátsyún, Kandwálsyún, Kapholsyún, Manyársyún, Nádal-syún, Paidúlsyún, Patwálsyún, Ráwatsyún, Sitonsyún and Aswálsyún. The land-tax at each settlement was assessed as follows:—

1815.	1816.	1817.	1820.	1823.	1826.	1829.	1840.	Current.
Rs.	Ra.	Ra.	Rs.	Rs.	Rs.	Ra.	Ra.	Rs.
5,006	2,148	6,598	8,151	10,102	10,429	10,555	10,652	17,865

At the current settlement there were 506 estates comprising 648 villages, containing an assessable area of 29,197 acres, of which 25,726 were cultivated. The receipts of 1861 amounted to Rs. 11,448, of which Rs. 363 were *sadábart* and Rs. 348 *gúnth* and *mudfi*, represented by Rs. 1,221 in the total of the new assessment. The water-mill rent amounted to Rs. 71. The land-tax fell on the total assessable area at Ra. 0-9-9 per acre and on the cultivation at Rs. 0-11-1 per acre. The population in 1841 numbered 22,063 souls (9,942 females); in 1853, 33,497 (16,491 females); in

¹ *Ibid.*, 534.

² *Ibid.*, 539.

1858, 34,232 (16,530 females); in 1872, 44,727 (22,544 females), and in 1881, 48,220 (24,582 females)

Bárahsyún, as its name implies, originally consisted of twelve sub-divisions named after the clans that occupied them. It is bounded by the Nyár river on the east and south and the Ganges on the west. The hills throughout are for the most part bare of wood; but the whole tract, with the exception of some portions of the river glens, is eminently fertile, and bears a resemblance rather to Kumaon than to Garhwál. The villages are large and the population plentiful and industrious. Each patti generally has its own separate valley, and the surplus produce is sold at Srinagar, on the pilgrim road, and in the plains; tobacco of a good quality is produced in low situations and sugarcane is sometimes seen. Hemp is but rarely grown; neither do the people use sheep and goats for the purposes of traffic. Their dress also is more frequently made of cotton than of hempen cloth, and woollen apparel is quite unknown. Land being here valuable gives rise to considerable litigation, and the vicinity of the courts (perhaps the cheapest to suitors in all India) enables many of the inhabitants who are fond of law to gratify their inclination. This part of the country was very much injured by the oppressive rule of the Goikhális; but, even in the time of the Rájás, near the close of last century, General Hardwick describes the tract as wretchedly waste. Now it is highly cultivated, the population has more than doubled, and there is no part of the hills wherein the benefits of our rule are, more conspicuous to the eye or more often recited to the ear. Clay slate and quartz rock almost exclusively prevail.

Bárabisi, a patti of parganah Sira in Kumaon, lies between the Rámganga river to the west and the Kálápáni or Bichol river to the south and east; on the north it is bounded by the Athbisi patts, and on the south by Seti, Talla and Kharáyut of Shor. The road from Pithoragarh to Thal runs through this patti to the Rámganga valley, passing by Bichol and Luwáket, in a north-westerly direction. The Askot road running north crosses the north-eastern end of the patti by Kanauli and Shirauli. Bárabisi is comparatively open and highly cultivated; the head-waters of the Kálápáni form the drainage lines and the main stream the southern boundary

to its junction with the Rámghanga on the left bank in latitude $29^{\circ}39'50''$ and longitude $80^{\circ}11'0''$. There are copper mines at Haráli, seldom worked now. The total assessable area comprises 2,263 *bhis*, of which 862 are culturable and 1,400 are cultivated (381 irrigated). The land-tax yielded Rs. 624 in 1815 : Rs. 940 in 1820 ; Rs. 1,075 in 1843, and is now fixed at Rs. 1,855 for the term of settlement, with an incidence of Rs. 0-13-1 per acre on the whole area subject to the payment of land-revenue and of Rs. 1-5-2 per acre on the portion cultivated. The population at the time of settlement numbered 3,066 souls, of whom 1,627 were males. Some 66 *bhis* are held free of revenue. There is a school at Luvákot. The patwari resides at Aganya.

Bárahát, a village in the patti of the same name in parganah Rawain of native Garhwál is situate on the right bank of the Ganges or Bhúgirathi, about 40 miles above Tihri. The houses are built of large stones and covered with slabs or coarse slates laid on strong timbers. At the time of Kaper's visit, in 1808, they were generally ruinous, having suffered much from an earthquake in 1803, on which occasion between two and three hundred persons were killed, besides great numbers of cattle. From the central position of this place, there are lines of communication with various parts of Garhwál. the distance to Gangotri is estimated at seven days' journey ; to Jannotri at five ; to Kedárnáth at twelve ; to Sínagar at six. Here travellers proceeding to Gangotri lay in provisions, as no supplies can be obtained higher up. In 1816 Fraser describes Bárahát as 'a most wretched place, consisting of not more than five or six poor houses surrounded with filth and buried in a jungle of nettles, thorns and the like.' Tradition records that it was once a place of note and contained fifty to sixty shops. The ruins of several temples remain. One at Dathatihri is sacred to Siva as Visvanáth: hence the place is also known as Uttar-Káshi. Parasuráma has also a temple and Murli-Manohar and there are several places of ablution for pilgrims proceeding to Gangotri. At the Sukh-ka-mandir near the village is a remarkable trident or *trishul* set up in honour of Siva. The base or pedestal, made of copper, is about three feet in circumference, and supports a shaft of brass twelve feet long, surmounted by a trident, having prongs each six feet long. The trident has been figured on

the plate given in a former volume,¹ where also Bārahāt is identified with the Brahmapura of Hwen Tsang.² The natives assert that the Tibetans formerly held this country, and attribute to them the construction of this relic. The Brahmans maintain that this lofty trident is miraculously maintained perpendicular on its narrow base, and defy any one to overthrow it, but it is in fact fixed into the ground by an iron bar. There was formerly a temple over it, but this was destroyed by the earthquake of 1803. On the opposite side of the river near Utarwāni are the remains of a fort called Arāsu and below it the Bāra-gadh stream joins the Bhāgirathi. Below Bārahāt a *jhūlá* or rope bridge connects it with Srinagar, and below this a broad valley stretches for three or four miles consisting of table-land in which probably the river ran in former times. The Bhāgirathi has here a wide channel, though still retaining much of the character of a mountain torrent

Baráun or Barhúon) a patti of parganah Gangoli in Kumaon, is bounded on the north by patti Pungaráun; on the south by patts Bel and Bherang; on the west by patts Athgaon and Kumsyár, and on the east by patts Bārabisi and Māli of parganah Sira. The eastern Rámanga flows along its eastern boundary. The principal villages are Belkot, Bhandárigaon, Bora-Sangarh, Dangigaon, and Bhubaneswar where there is a noted temple. The assessable area comprises 5,208 *bhis*, of which 2,842 are culturable and 2,366 are cultivated (596 irrigated). The land-tax yielded Rs. 343 in 1815, Rs. 545 in 1820, Rs. 850 in 1843, and is now fixed at Rs. 3,024, which falls on the whole assessable area at Re. 0-9-3 per acre, and on the cultivation at Re. 1-4-5 per acre: 2,147 *bhis* are held in fee-simple and 803 are held free of revenue. The population at the time of settlement numbered 4,312 souls, of whom 2,339 were males: 21 villages were transferred to Athgaon to form a new patti, and four were received from Pungaráun at the recent settlement. There is a school at Beni-Nág.

Barmdeo (or Bishmadewa, or more correctly Mundiya), a mart in the Tallades Bhábar in Káli Kumaon, is the principal trading centre for eastern Kumaon. It is situate on the right bank of the

¹ Vol. XI., p. 512, and plates IX and XXX. of J. A. S. Ben., Vol V., p. 347. There is a similar trident at Gopceswar in British Garhwál. ² *Ibid.*, p. 453.

river Káli henceforward known as the Sárda or Ghágra, 50 miles east of Almora. Since 1850 it has become a place of considerable importance as the depôt for the trade from Tibet by the Dárma and Byáns passes and the Nepál trade through the market of Súr Mandi¹ on the opposite side of the river. There is a police station and bazar removed to their present site near Tarakpur after the floods of 1880 had destroyed the old one. The inhabitants suffer much from malaria in the rains, and fever and diarrhæa are very prevalent, though not to such a degree as in the Bhábar below. The trade is carried on from December until May, and such statistics as are procurable will be found under the head, of 'Trade' in the article *Kumaun*.

The Kumaun chain—bold, lofty, and scarped, with a superb glacis of forest along its base—here meets the Doti mountains at a right angle; these if possible, clothed in still thicker forest, extend north and south, running far down in this last direction, with the Káli flowing at their foot so as to leave the Nepálese scarce room for their bazar. The river Sárda winds its way through the angle to the north-east where the mountains on the Kumaon side are scarped into lofty walls and pinnacles, on the topmost of which about eight miles distant is the far-famed shrine of Purnagiri, where Devi is adored by pilgrims from mountains and plains. Behind this the magnificent mountain of Nali-mun (5,498 feet) rises far above the forest: on its western flank is the pass to Champáwat by Saumuna. The Káli opposite the mart is about 100 yards across, and from ten to fifteen feet deep, perfectly clear and flowing with a strong steady current. The station of the great Trigonometrical Survey close to the bazar lies in latitude $29^{\circ}6'30''$ and longitude $80^{\circ}11'37''$ at an elevation of 866 feet above the level of the sea. A canal has been constructed at a cost of three lakhs of rupees to carry 200 cubic feet of water per second, and draws its water from the Káli, a little above the bazar. It is intended for the cultivation in the Bhábar at the foot of the hills, and would have been very successful notwithstanding occasional injury by floods, especially in 1880, if the people could be induced to turn to irrigation here. Madden's visit to the Purnagiri temples like almost all his

¹ It is said that the Nepál Government receive Rs. 25,000 per annum in transit dues at this mart. Barmdeo is a *gorá* about four miles above Mundiya bazar.

writings is worth reproduction. They lie almost eight miles east-north-east from Barmdeo ; the route follows the old Champawat road for about two miles, undulating on high ground covered with forest, the Káli following beneath on the right hand in a magnificent gorge. The path then quits the main road near Ránshát, and for the rest

of the way is rugged and difficult, the
 Furnagiri. Ladagúr torrent following in a woody ravine on the left. The elevation of the shrine is almost 3,000 feet above the sea ; at this level though greatly cooler than Barmdeo, the malaria of the Bhábar still prevails, with *sál* forest and fine clumps of bambu which being sacred to the Devi are never cut ; the popular belief being, that if converted to use, scorpions and centipedes innumerable would issue forth to punish the sacrilege. Nothing can surpass the beauty and variety of the scenery about Furnagiri : nature absolutely revels in the luxuriance of the universal vegetation, which no American forest, north or south, can possibly exceed ; but to superstition alone are we indebted for a path through and over the otherwise impassable thickets and precipices. The first symptom of sanctity in the wilderness is a small *marki*, dedicated to Bhairo as door-keeper ; here the pilgrims leave their shoes ; and no man of low caste or of a notoriously bad or even unfortunate character or filthy in person or discourse is knowingly allowed to advance further.

Túnias lies in a sheltered glen about 200 feet below the westernmost of the three shrines ; it is a small, black-domed structure, coated with copper, and placed on the crest of the great mural precipice of sandstone which here faces the south. A little to the south-east this wall terminates and the mountain springs up into a very lofty and remarkable pinnacle of rock, presenting a precipitous face to the river, which rolls at its base in a winding chasm of vast depth, the waters generally calm and of *lapis-lazuli* tint. The gorge makes a rapid bend here, which brings the current right against the upper end of the cliffs, which perhaps owe their existence to its slow operation. Each shoulder of the rocky pinnacle is consecrated by its temple, the easternmost being the most sacred and of very difficult access over cliffs and razor-edged ridges. Here the animals are sacrificed, the Brahmans appropriate the head and one shoulder of each beast with all the

cash they can extract, and considerable numbers of cocoa-nuts, the offering of which seems a sign connecting the mountain goddess and her rights with the ocean-loving Káli of Calcutta. The acme of merit is attained by him whose offering, like Balak's, consists of seven goats. The peak itself is the adytum of the goddess where none can intrude with impunity; a fakir who ventured to do so in days of yore was pitched across the river and found flattened to a pancake in the *ban* of Doti (*Madden*).

Basantpur, a village in the eastern Dún, which gave its name to a parganah now absorbed. It was plundered by Husain Khan in 1575 A.D., and again by Khalilullah in 1655 A.D. (*Gaz*, XI, 545, 563).

Baun, a halting-place in Patti Malla Dárma of Kumaon, is situate in north latitude $30^{\circ}-14'-20''$ and east longitude $80^{\circ}-35'-45''$ on the left bank of the E. Dhauli at an elevation of about 10,000 feet above the level of the sea. The population in 1865 numbered 270 souls, the largest in the patti. From the encamping ground a view of three large glaciers on the eastern slopes of the Panchachúli is obtained. The marches from Askot, according to Colonel Garstin, are (1) Baluwakot in Malla Askot, a village near which the Dárma people reside in winter; (2) Dharchula, the wintering station of the Byáns Bhotiyas; (3) Khela on the boundary between Talla Dárma and Askot; (4) Sobhula in Talla Dárma; (5) Chalkam in Malla Dárma; (7) Naling; (8) Baun or Go, and (9) Khimling, a village of tents usually occupied by Khampas from Hundes who have settled here. It is the last inhabited place on the route to the Dárma pass and is situate on the left bank of the Dawai which joins the Lissar to form the Dhauli above Baun. It is five marches for laden sheep from Khimling to the foot of the pass at Dovábi.

Bel, a patti of parganah Gangoli in Kumaon, lies between the Rám-ganga (eastern) on the east and the Sarju on the west. These rivers unite at the Rámeswar temple to the south of this Patti the northeru boundary is formed by the Athgeon and Baráun Pattis of the same parganah and the eastern by Pattis Bherang, Waldiya Malla and Ráwal. The Pithoragarh and Almora road runs east and west through Bel between the iron suspension

bridge on the Rámganga and that over the Sarju passing by Kothera, Gangoli Hát, where there is a travellers' bungalow in latitude $29^{\circ}-39'-23''$ and longitude $80^{\circ}-5'-24''$, at an elevation of 5,290 feet above the level of the sea, Kún, Panauli, and Hanora. To the north of the road are Sunár, Phúrsil, and Uparára. To the south between it and the Búmbhil peak (7,107 feet) are Ol and Pábhe. Between this range and the Sarju lie Nangálti, and Askora above Rámeswar. The assessable area comprises 3,322 *bhis*, of which 1,733 are culturable and 1,588 are cultivated (238 irrigated). The land-tax yielded in 1815 Rs. 344, in 1820 Rs. 526, in 1843 Rs. 743, and is now assessed at Rs. 1,855, which falls on the whole assessable area at Re. 0-8-11 per acre and on the cultivation at Re. 1-2-8 per acre. One village was received from Rangor and 37 were transferred to Athgaon at the recent settlement. The patwári usually resides at Gangoli Hát and collects the revenue of Bherang also.

Belkhet (or Bhilkhet), a camping place on the road from Barindeo to Champáwat on the right bank of the Ladhya river, is situate in Patti Tallades and parganah Káli Kumaon in north latitude $29^{\circ}-12'-30''$ and east longitude $80^{\circ}-12'-10''$, about 13 miles from Barindeo and 12 miles from Chhirapáni. From Barindeo the road passes up a gradual ascent, interrupted by torrents, over the Bitrigár carrying a good stream of clear water; next Malla and Talla Deh, two small cultivated crater-like depressions and a little higher the Túngagár stream, near which are the Syála tarns. A steep ascent leads to the Bayalchína pass, over 4,000 feet high, on which is a *naula* or covered well built by Mr. Lushington, a late Commissioner. The descent to Belkhet is long and latterly very steep, there is neither a bungalow nor a shop for grain here, and supplies have to be obtained from either Barindeo or Champáwat. The scenery of this march is pretty, and everywhere the valleys and mountains exhibit the most exuberant vegetation. The *Pothos scandens* covers the trunks of large trees on the northern aspect of the Bayalchína pass, where also in the damp half dark glens the more beautiful Wallichia palm occurs in profusion, with occasional specimens of the wild plantain. On the southern side of the pass, especially near the Túngagár, the *kal janka* (*Thunbergia coccinea*) climbs the trees, and towards the summit, *Cissus serra-*

latu covers every rock and *Olea glandulosa* forms a timber tree. The valley consists of greenstone and dolomite; the mountains to the north exhibiting green and blue dolomite in vertical strata with hornblende slate near the Ladhiya. The summits are of gneiss and granite, which last Dr. McClelland found reposing on gneiss and hornblende slate on the south-west declivity of Chhirapáni.

From Belkhet to Chhirapáni, about twelve miles, the road follows the right bank of the Ladhiya for a mile or more, and then under the small village of Uparkot, crosses the stream where the entire width of the glen is occupied by its channel of stones and huge boulders, the latter rudely piled on each other with a general dip towards the head of the stream. Here the Ladhiya receives in its left bank the Bhubbkula up which the road proceeds and rises rapidly. The first pass is attained at the village of Kukrauni; hence along an undulating ridge two miles to Salli; there is a *chodár* grove and a spring called-Brahm about a mile beyond this, a little down to the east. Here commences the second pull up one of the great spurs of the Kánadeo (7,248 feet) range and only terminates about three quarters of a mile short of Chhirapáni which lies rather beyond the highest point of the pass. The declivities on each hand during this ascent are extremely steep and deep. Chhirapáni derives its name from a small stream which falls over the rocks here in a petty cascade. There is a bungalow and tea-garden here, and the elevation is 6,569 feet above the level of the sea. Close by on the east is the temple-crowned peak of Kánadeo; beyond a *col*, the range is continued eastwards in two other peaks (6,235 and 5,536 feet respectively). To the south Náli-Mun is conspicuous among the outer ranges; north-west is the highly cultivated vale of Chárál, to the north-east Thákil is seen and to the north are far on each side the snows. Hence to Lohughát (*q.v.*) ten miles.

Bhábar (or Bháwar) is that portion of the Garhwál and Kumaon districts which lies between the base of the hills and the Bijnor and Taná districts. The Bhábar portion of Garhwál (*q. v.*) is so small and unimportant that it is omitted from the present notice, which consequently refers only to the tract along the foot of the hills containing no purely hill village and lying between the Sárda on the east and the Kotirao or Phika on the west. It includes the Bhábar.

portions of Pattis Tallades in Káli Kumaon, Chaubhainsi in Dhyánirau, Chhakháta and Kota, and the Chalkiya *ildkah*. It is to be distinguished from the Bhábar tahsíl which for administrative purposes includes the hill portions of Kota and Chhakháta, and parts of parganahs Dhaniyakot, Dhyánirau, Phaldakot, and Ráingár. The census of 1881 gives the population of the Bhábar tahsíl in February as 132,360 souls, but with the bursting of the buds on the *sissu* in March—April, the majority of these return to the hill villages. The Bhábar tahsíl may therefore be considered as divided into the upper or Pahár portion included in the general notice of the Kumaon district and the lower, lying below the hills with which we have to deal here.

The physical characteristics of the Bhábar have been sufficiently explained in a previous volume.¹ It may well be described as the land of jungle and torrents usually dry in the summer. The

Eastern Bhábar.

only permanent streams of any importance being the Nandhaur or Deoba, Gaula, and Kosi, each of which is separately noticed. Commencing on the east with the Tallades Bhábar we find it bounded by the Sárda, which separates² it from Nepál. Next the Sárda comes the numerous torrents flowing directly into the Sárda.³ Then the Chíni torrent which uniting with the Kulauniya or Pandwáni again divides into several branches in the Taráí. Nothing can be more confusing than the nomenclature of these streams, some of which possess three or four names in a course of twenty miles. Some divide or coalesce with others and again divide according as they get a larger or smaller supply of water. One year one of a group carries the main stream and another year another. The country between each main channel being cut up by torrents divided by low *sál* covered spurs running into the grassy savannahs which wherever great moisture exists are covered with tangled almost impenetrable undergrowth and great cane-brakes. West of the Pandwáni comes the Laibar or Kámun between which and the Ghún or Gúmti the country is much cut up by torrents. A low spur here runs down from the hills covered with *sál* and a thick undergrowth. There is a large swamp in the bed of the river opposite Marwa and to the

¹ *Gaz.* X., 86—90.

² See further articles—Bairmdeo and Hildráni.

³ For this portion of the Bhábar in 1853, see Lieut. Burgess' report in *Sel. Rec.*, N.-W. P., III, 116, Allahabad, 1867.

south of the Ramsay road. Beyond this is the clearing called Gangapur, a narrow strip of grass land extending from it to the foot of the hills. Then across several torrents to the Betáli savannah and beyond it the Hanspur *chaur* and the Nandhaur or Deoha. The Chaubbainsi Bhábar extends from the Laibar or Kámun to the Sukhi west of the Deoha. Between the Deoha and the Sukhi is the great Chorgaliya clearing with its numerous settlements. West of the Sukhi comes the Chhakháta Bhábar and the immense sheets

of cultivation having Haldwáni as their
Western Bhábar. centre and watered by the Gaula.

West of Chonchala comes the Kota Bhábar and west of the Kosi, the Chulkiya *ilákuh*. These are all much more free from jungle and contain very much larger areas under cultivation and more permanent villages than the tract east of the Nandhaur. It is here also that the wonderful system of irrigation by which all the spare waters of the hill rivers are brought under control is seen in perfection. Clearances, too, have so ameliorated the climate as to allow of people remaining in many places during the whole year. The great road from the Sárda to the Ganges, known as Ramsay's road, passes through the whole tract besides good metalled roads from Bareilly to Ráuibág and from Moradabad to Káladhúngi, and now the railway to Ráuibág passing by Haldwáni will revolutionise the economic bearings of this tract and render its possession in every way more valuable. Rámnagar is the mart for Kota and Haldwáni for Chhakháta, both are rising towns and have a separate notice.

The three men who have moulded the fortunes of Kumaon are
Administration. the same who have administered the Bhábar,
and on their reports we have to rely for our
information:—Mr. Traill up to 1835, Mr. Batten from 1840 to 1850, and Sir Henry Ramsay from 1850 to 1884. Traill found the

Bhábar the haunt of banditti; continually
Mr. Traill. recruited by the outlaws which the disorga-
nisation of the previous half century produced in numbers. For
some years he was engaged in a paper war with the plains authorities about the boundaries, and was always complaining of the dakaits who, driven from the lower country, found a safe asylum in the swamps of the Tarái and the jungles of the Bhábar. In a previous volume I have given some account of the state of these tracts up

to the British occupation. In his first report¹ on the Bhábar, Mr. Traill writes:—"In the direction of Kota and Chhakháta not less than fifty villages have been reclaimed within the last eight years. As a preliminary measure to the arrangement of the boundary it would appear indispensably necessary that the whole tract of the Taráí should be declared the free and disposable property of Government, with the reservation to individuals of such portions as may be in their actual occupation. This principle is founded on the inherent and undisputed right of the sovereign in the soil, which right must be considered in the present instance as existing in full force from the length of time since which the tract in question has relapsed to a state of nature, and which can consequently, with the exceptions above alluded to, be nowhere controverted by the claim of occupation. The sovereigns of Kumaon and Garhwál being then driven into exile were followed by a great number of their former subjects, and these latter settling chiefly in the Taráí of their respective principalities naturally preferred owing allegiance to the authorities in the plains rather than to the Gorkhális. As this latter power became quietly and fully established in its successive conquests the re-annexation of the Taráí became an object of its policy. In Kumaon proper this measure had been partly effected, and to this circumstance is owing the discordant claims of the Bilhari and Káli Kumaon zamindárs which are now under litigation. A further cause of the vicissitude of jurisdiction is to be traced to the wandering habits of the Thárús and Bhoksas, the two tribes who chiefly cultivated in the Taráí. These persons holding an undisturbed monopoly of a vast extent of territory, and being the objects of rivalry to two Governments, removed in whole communities to or from the foot of the hills according as caprice or interest dictated. The spot, where the new cantonment was established, immediately assumed the name of the deserted village, and in this manner the same name became inscribed in the records of both the plain and hill parganahs, while the practice of paying revenue to both Governments to ensure double protection also led to the same confusion."

To such a height had these disputes risen that we find them occupying a great portion of the correspondence of the years 1823-26, and the

Boundary disputes.

¹ 15th January, 1822, to Government,

question of the boundary between the Bhábar and Rohilkhand was then the burning one of the day. So early as January, 1820, Mr. Traill brought to the notice of the Board of Revenue the existence of a fruitful source of quarrel in the unsettled state of the frontier towards Moradabad, and the Collector of that district was directed, in concert with the Commissioner of Kumaon, to adopt measures for the demarcation of the boundary between their respective districts.¹ Delays arose as it was hoped that the regular survey of the Moradabad district would soon take place, and it was not until 1823 that final instructions were issued to Mr. Traill and Mr. Halhed to undertake the survey and settlement of the boundaries of their respective districts. Mr. Traill stated the case for the hillmen, that from the want of pasture in the hills they were obliged to send down their cattle to the Bhábar, where they remained during the greater part of the year. This practice led to the settlement of several new villages, not less than fifty having been reclaimed from the jungle between 1817 and 1823. The greater number of these villages were situate on the frontier towards Rohilkhand, where the facilities for irrigation were greater than in other parts of the Tarái, but the conflicting demands arising from divided jurisdiction had hitherto prevented the development of cultivation such as might have been anticipated. An affray occurred at Tanda, which, although it lay within the customs posts and chain of military parties established by the hill authorities, had been given in farm by the Collector of Moradabad to a person from the plains. Mr. Traill accordingly submitted a list of tracts which he

¹ To Board, dated 1st January, 1820.
 From Board, dated 21st January, 1820.
 To Board, dated 15th January, 1822.
 From Board, dated 9th April, 1822.
 From Board, dated 24th January, 1823.
 To Board, dated 27th January, 1823.
 From Board, dated 5th February, 1823.
 To Board, dated 24th February, 1823.
 To Board, dated 12th September, 1823.
 From Board, dated 6th October, 1823.
 From Board, dated 17th November, 1823.
 From Board, dated 24th November, 1823.
 From Board, dated 11th June, 1824.
 From Mr. Halhed, Moradabad, dated 24th March, 1823.
 To Mr. Halhed, Moradabad, dated 28th March, 1823.
 From Mr. Halhed, Moradabad, dated 1st April, 1823.

To Mr. Halhed, Moradabad, dated 4th June, 1823.
 From Mr. Halhed, Moradabad, dated 19th August, 1823.
 To Mr. Halhed, Moradabad, dated 4th September, 1823.
 From Mr. Halhed, Moradabad, dated 4th October, 1823.
 To Mr. Halhed, Moradabad, dated 7th October, 1823.
 To Government, dated 25th December, 1823.
 To Mr. Halhed, Moradabad, dated 25th August, 1824.
 To Mr. Halhed, Moradabad, dated 12th August, 1825.
 To Mr. Halhed, Moradabad, dated 11th October, 1825.
 To Board, dated 17th January, 1826.
 To Board, dated 21st November, 1826.
 From Board, dated 30th November, 1826.

desired to have excluded from any farming leases which might in future be granted by the plains authorities. The principal disputes were between the lessees of the farms of forest produce and grazing tax appointed by the hills and plains authorities respectively. The customs-stations of the hill farmers were placed on the immediate frontier at points where the various tracts into the forest joined on the main road and in several instances for the convenience of water, within the boundaries claimed by the landholders of Rohilkhand. It was eventually determined that an experimental boundary line should be made by a line drawn from one spur or promontory of the lower hills which all along the frontier jut out into the plains, to the adjacent one; and to Mr. Halhed was entrusted the task of demarcating this line along the whole border of Bareilly and Moradabad and the villages to the south of that line, and the farming leases of forest products were to be transferred to the adjoining districts of the plains.

Mr. Traill writes¹ in 1823:—

"The *gdi-chardí* had from time immemorial formed a part of the public assets in Kumaon, and had continued to be separately leased to individual farmers from the conquest. The Traill on history of dues. collection of this impost in a portion of the Kumaon forests had been formerly made over to the principal *chaukidárs*—Ain Khan and Ami Khan—for the support of their respective establishments. On the abolition of the *chaukidár* system in 1817, the collection of this impost within the limits in question naturally ceased. The arrangement in 1820 was made to re-anneve the *chardí* duties there to the rent-roll. The only other novelty in that measure was the simplification of the duties by fixing them at a specified rate per head of cattle in lieu of former numerous items such as *ghikar*, *dansa*, *gobar*, *angul*, &c., under each of which separate demands were made from the herdsmen." (The leases given were objected to by Mr. Halhed, and in reply Mr. Traill goes on to say that the rates were fixed in the leases and were less than the former dues.) "The military parties in the forests are in no way available for revenue duties, being stationed there solely with the view of protecting the life and property of the hill-men from the attacks of the low-land *dakaits* and their interference in collections of any kind is peremptorily prohibited. It appears to me that far too much stress is laid on the spirit of encroachment said to be evinced by the hill *zamindárs*; as far as my information goes, the Rohilkhand farmers and *talukadárs* are equally active in their attempts to extend the sphere of their demands, these conflicting claims without attributing particular blame to either party may fairly be deduced from former events. The whole of the jungle estates from Káshipur to Bilhári, formed, at a period not very remote and not greatly antecedent to the cession, an integral part of the Kumaon *ráj*. Since the annexation of these *mañds* to Rohilkhand by the Nawab Asaf-ud-

¹ To Government, 19th September, 1823.

daula no regular and general adjustment of the boundary line between the two provinces has ever taken place, the kanúngoi records of those *maháls* necessarily exhibit the whole of the villages which originally formed a part of them, including some even within the hills.

"The Kumaun village-lists of the Gorkháli Government contain those villages nearest to the hills, which continued invariably attached to them, and also many more advanced lands which were subsequently reclaimed and brought into cultivation by the inhabitants of this province; among the latter fall the disputed villages on the Moradabad frontier. The principle of assuming the projecting head lands for the points of demarcation, as proposed by Mr. Hallid, and approved by Government, will require many modifications on the Moradabad frontier, as it implicitly followed, many of the villages of that district will be excluded from its jurisdiction. At the western extremity the taluka of Chandí enters far into the hills being intersected from the Ganges to Lal Dháng, by a low range of hills, branching off from the Chandí Pabár opposite Hardwár. From the villages of Lal Dháng, to another point of the same name on the Káshíur frontier, and from thence to Gaibuwa, the indentations in the lower range are frequently extensive and contain many Rohukhand villages, among others Chulkiya and Burhiya which by such an arrangement would be included in Kumaun. As the nature and extent of the temporary cultivation appears not to have been perfectly understood, it may be stated in explanation that from November until May inclusive, the entire population of the southern parganahs of Kumaon to the amount of certainly not less than thirty thousand souls annually migrate to the foot of the hills. The cultivation carried on by them in the Kumaon forests during these visits is considerable, and every means has been adopted to encourage it."

In January, 1826, a joint report was sent in and adopted by Government; from the Ganges to the Rámghanga the lower range of hills was taken for the boundary, and from its having few openings or bays presented no difficulty. From the Dhaon river, seven miles west of Koti-

Compromise effected. rán to the Gaibuwa promontory, the principle of making the projecting headlands the points of demarcation was followed, and so far as possible those spots at which the cattle pens or *goths* of the herdsmen from the hills were established were included in the jurisdiction of the hills, whilst the hillmen were also allowed the privilege of pasture for their cattle in common with the men from the plains on payment of the usual grazing dues. From Gaibuwa the lower or southernmost range turns to the north whilst the existing line of jurisdiction continued in the general direction from north-west to south-east, and here the latter line was followed and demarcated through the forest, the boundaries recognized by the headmen of the adjacent tracts being adopted. A map was made showing all these points, and copies were sent to the chief officers of

the adjacent districts. Large trees were taken as the permanent marks where they occurred, near the base of the hills. Pillars of large stones were erected at intervals of four or five hundred yards, and where such materials were not procurable, pillars of brick masonry were constructed along the entire boundary. Towards Bijnor the Sanai Nadi where it unites with the Koh, about a mile below the junction of the Pauriyála, was taken as the boundary, and the entire arrangement was completed in 1832¹.

To the east the dispute between the representatives of Major Hearsey, who claimed the Bilhari parganah and the hill men, had also to be settled, and the commission appointed for the purpose fixed on the Samliha nála as the boundary between the Bhábar in eastern Kumaon and the Tarái belonging to the plains. This decision was based on the records before the British occupation.² Another object of dispute was the *sál*-covered island in the Sárda called Chandi-chak, and this was given up to Oudh for no apparent reason other than the pertinacity with which the claims to it were put forward by those interested in securing it. The importance of having correct boundaries was not in the least due to the value of the land for agricultural purposes, but to the grazing rights and in a secondary sense to the right of disposing of the forest produce, for it was on these two heads alone that the entire revenue depended in the earlier days of British rule. *Gá-chardi* or grazing fees was one of the miscellaneous items of revenue retained at the British occupation as possessing some appearance of a due for the use of the land. In the hills they had been classed under *gobar*, *puchya*, and *ghikar*; but these were abolished, and in the Bhábar they had been farmed to the hereditary *chankidárs* or watchmen, the Meosor Mewáris and Hairis, by whom they were called *donia* from the *dona* or wooden-bar to which the cattle are tied at night. The full tax was levied only on the strangers who came to graze. During the first few years after the conquest it had not been necessary to bestow much attention on the Bhábar as it was practically waste and deserted, but with security to life and property the annual migration to the Bhábar recommenced, and the tax on grazing was again introduced and

¹ To Collector, Moradabad, dated 21st April, 1831. To Collector, Moradabad, dated 3rd May, 1831. From Government, dated 21st August, 1832. To Board, dated 12th June, 1832.

² For references see Gaz., X., 848

farmed in three leases for 1822-23 at Rs. 2,077 a year, but the cattle of headmen of hill and plains villages and of permanent residents in the Bhábar were declared to be exempt from the tax. In 1824, the collection of these dues was intrusted to the Bareilly and Moradabad authorities, but in 1826 this duty was restored to the administrators of the hill districts, and at the same time the plainsward boundary was arranged on a firm basis and the amount to be levied was fixed, and the persons who should collect these dues and those from whom the dues were to be collected were ascertained and made known to the people, so that we hear very little of them afterwards.

From a report¹ made in 1837 we learn that the portion of the Bhábar, included in Kota and Chhakháta, contained then:—

	Area cultivated.	Waste.	Total.	Revenue. Rs.
Kota ...	30,923	71,141	102,064	4,819
Chhakháta ...	29,067	81,971	81,038	2,011
	<u>59,990</u>	<u>153,112</u>	<u>183,102</u>	<u>6,830</u>

The area is calculated in *kotas* or *bighas*, but as no measurement had ever taken place the area given was based on the estimate made by the headmen and the villagers. Even so rough an estimate as this had never been made for the Káli Kumaon Bhábar. Seventeen of the Kota villages and twelve of the Chhakháta villages lying along the foot of the hills had been cultivated from olden time by the hillmen as their inalienable right. The headmen or *padhāns* received two ploughs (*hul*) of land as their remuneration and relinquished this if they vacated office. The irrigation channels (*gúls*) were broken up every year in the rains and repaired fresh in November at the cost of the sharers. *Pahikásh* cultivators paid five rupees per plough-land, calculated at as much as a pair of bullocks could plough in a day and that could be sown, the produce being eight to tenfold. A stranger sharer giving his aid received one-third; if supplying bullocks and seed two-thirds the produce. In prosperous years the profit was about Rs. 25 to Rs. 35 per plough-land after deducting cost of repairing water-channels, bullocks, implements, and seed. As a rule the rain-crops

¹ To Beards' 15th July, 1837.

were had and did not pay. Since the introduction of British rule 38 villages were brought into cultivation in Kota and 23 in Chhakháta by granting the proprietary right to whoever cleared the waste. These new proprietors leased out the land to tenants-at-will at Rs 2 to Rs. 4 per plough-land, whilst two villages in Kota and ten villages in Chhakháta on the Taráí border were leased to Bhoksas on a system of advances by the local landholders. The earlier settlements in the Bhábar were encouraged by the grant of full proprietary right for their entire holding to the persons who brought a tract into cultivation. This practice was in accordance with the system pursued by both the Rájās of Kumson and the Gorkhális, and was found to promote in a great degree the reclamation of the forest waste.¹

Still, considering the present state of affairs, in 1837 there was little cultivation in the Kota Bhábar though it was then the richest portion of the tract. Lálji Chakráyat was the principal landholder and compared with others was a man of some substance, who had materially aided in the development of the Bhábar by planting colonies of cultivators and arranging for their support. In the Chhakháta Bhábar from the foot of the hills to Tanda there was some show of cultivation close to the *gúls* or water-courses, but the experiment of digging a well made near Tanda showed that no water could be obtained at a depth of 180 cubits throughout the continuous belt of thick forest which existed there. Harak Singh Máhra, the patwári, was the most influential person in this tract. In the Tallades Bhábar there was hardly any cultivation and no permanent population, due to the extreme unhealthiness of the climate and the ravages of elephants and other wild animals.² The principal landholders there were Chaudhri and Bachhi Bargalla. Chorgaliya alone in the whole of this tract was well watered and well cultivated, and, indeed, this report represents fairly the state of affairs in the eastern Bhábar to the present day.

We have in Mr. J. H. Batten's report³ an interesting account of his connection with the Bhábar, which may be said to comprise the period 1840 to 1850. As this report gives the first detailed account of any settle-

¹ To Board, 21st November, 1826.
1837.

² To Board, 10th January 1846.

³ To Commissioner, 17th May,

ment of this tract, I shall summarise it here largely for its historical and practical interest and as fixing distinctly the somewhat vague localities of its predecessors. *Bhábar Tallades* under Káli Kamaon lies along the right bank of the Sárda as far as the junction of the Saniha nála, with a length of eighteen miles from Barmdeo and a breadth from east to west of ten miles. The southerly extension of this division is narrowed almost to a point above the junction of the Saniha, and near the deserted bed of the Sárda the land is too stony for agricultural purposes. Tallades differs from the rest of the Bhábar in the absence (in 1843) of surface irrigation from *gáls* or water-courses. The Saniha stream flows along the southern edge of the tract, separating it from the pargana of Bilhari, while the beds of the Jagbura or Jagyara, which intersects the tract, and of the numerous torrent-ways which unite to form that stream, are almost dry in those parts where irrigation would alone be possible from their waters. The smaller streams which issue from the hills and run south-eastward to join the Sárda in the upper portion of the tract have so inconsiderable a body of water in their channels before they are lost in the gravel that irrigation from them to any extent is found impracticable. A little is attempted from two small streams at Bastiya and Ginda-khali immediately at the foot of the hills, but the quantity of water after February is said to be only sufficient for drinking purposes. In this tract, however, the tract of waterless forest is very narrow, and thereby presents a great difference from the western Bhábar, while without possessing the features of a regular river-valley it approximates in character to the country adjacent to the Ganges in the Saháranpur district below Hardwár. Here, as there, the digging of wells is found practicable within a short distance of the hills. It may, therefore, be assumed that the great bed of rolled stones underlying the Bhábar is deepest in the centre of the country which separates the Ganges from the Sárda, and that the porous gravelly detritus thins out as the land slopes down to either of those great drains. In none of the Tallades villages, however, is irrigation from wells attempted, and (except in the rains, when the *sots* or small streams become full and capable of embankment) the Tharus of the lower part depend on the rains and dews of heaven, and on the natural dampness of the soil, for the moisture which their crops require.

Bhábar Chaubhainsi extends from the Samha stream on the east to the Sukhi on the west. Within these limits are the Káman or Kámání and its small tributaries, the numerous affluents of the Nandhaur or Deoha or Dewa or Garra, as it is variously called, the Dewa itself and its great branch the Kailás and finally some small torrents which join the Sukhi or eastern Bahgúl. This tract may be estimated at somewhat more than 30 miles in a straight line from the Tímia pass to Asni and the breadth varies from six to twelve miles or more. Throughout the widely scattered clearings of this tract there is some *kharif* cultivation and

a few of the most hardy hillmen and *hális*
 State of cultivation.

in every clearing venture to remain and look after the rice-fields. Irrigation is easily carried on by means of small *gúls* taken off from the little streams which are so plentiful in this division, and no great embankments are required. Some of the clearings, however, are less advantageously situated in this respect, and there the *rabi* crops are the staple produce. This tract is peculiar in not swallowing up all the streams which pour into it from the hills. A great majority of these flow through the green forests, not unlike English brooks in the clearness and depth of their water (though some few are mere beds of torrents); and hence arise the excessive thickness and rankness of the vegetation in this tract. Some of the cane-brakes and *khair* (*Acacia catechu*) thickets are absolutely impenetrable, preventing all cross paths from clearing to clearing. East of the Dewa, the country presents a series of savannah-like valleys between high elevations, some of the latter covered with *sál* forest, and all cut up by ravines and utterly waterless. These heights and hollows run down in a parallel southerly direction from the hills. The clearings occupy the several hollows here alluded to, and hence the more plentiful supply of water than is enjoyed by the people of the western Bhábar, where (outside the lower hills at least) such irregularities of the surface are unknown. There are no marts in Chaubhainsa, but a few shops are found at Jaula-sál, a principal pass from the hills in the centre of the tract, and sell grain to the timber cutters and other visitants of the forest. The Dewa river rushes out of the valley of Dúrga-Pípal (almost a Dún), and its waters are rapidly taken up by the hillmen for the

irrigation of Chorgaliya, where there is now a thriving settlement, connected with Sitárganj by a good road.

Bhábar Chhakhata extends from the Sukhi river on the east to the Bhakra on the west, a distance of 25 miles or thereabouts ; while from the foot of the hills to the boundary of the Taráí the breadth varies from 15 to 20 miles. The Guna river nearly equally divides and forms the main characteristic of this division. On the north eastern extremity and close to the hills there is a set of small villages, watered by the numerous tributaries of the Sukhi, the bed of which river itself is dry in its upper and middle part of its course through Chhakháta.

Bhábar Kota extends from the Bhakra river on the east to the Koti Rao torrent on the west where it adjoins Garhwál, a distance of 35 miles or more. At the south-eastern extremity it extends very far into the plains, bordering on the Gadarpur parganah of the Taráí district, from which point it narrows considerably in the forest tract below Nayagaon and Kamola till it reaches the Kosi near Gaibuwa, beyond which on the opposite side of the river the hill Bhábar hardly extends further than the actual base of the mountain. The Patti is divided by Mr. Batten into (1) the Bhoksa villages belonging to the Chakráyat zamindárf; (2) the Bhábar villages lying outside the lower hills ; (3) the villages in the Kota Dún within the lower hills ; (4) scattered villages at the mouths of the several passes ; (5) the hilly tract called Kota lying between the Kosi and Rámanga occupied by occasional patches of cultivation, but without fixed villages. The first is now waste, the Bhoksas having moved down to Gadarpur, and compensation is still paid to the heirs of Moti Chakráyat amounting to Rs 300 a year. This tract is commonly called Kála-banjar from the colour of the soil. The Bhoksas made great swamps here by banking the Kakrála, Nihál, and their branches and wasting the water. Portions of the second tract are improving considerably and are watered by the Baur and Dabka. The scarcity of water will always prove a drawback to the increase of cultivation, for beyond the range of the Kála-dhúngi canal very little is available.

The third tract or Kota (q.v.) Dún is exquisitely beautiful, showing a sheet of cultivation eight miles in length by three and

four in breadth, dotted with mango groves, and emulating on a small scale the rich central plateau of the Dehra Dún both in appearance and climate. The revenue of this tract has been proportionately good. The inhabitants are all hillmen and the tenure is for the most part zamindári, though in a few instances the actual cultivators possess proprietary rights in their field. Some of the *Padhdás* are highly respectable men and far from poor, but they do not attempt, except very rarely, to produce on their lands anything more valuable than wheat, barley, rice, and the coarser cereal grains. Under more enterprising hands this Dún would probably become a grand field for the growth of cotton, sugarcane, and indigo, while the ginger and turmeric cultivation might be largely improved. West of the Dabka, which river here irrigates only its eastern banks, the Dún is chiefly a *sál*-forest with patches of cleared ground, with the exception of Patkot and Rámpur, the extensive lands of which are beautifully irrigated by the waters of the Bahmani river. The fourth tract or *ghát* villages is generally prosperous and resembles that described under the second head. The fifth division of the Kota Bhabar shows merely a series of hills and ravines, almost without water, which sufficiently explains the absence of revenue capabilities. The inhabitants and visitants of all the above described divisions of Kota belong to different parts of the hills, and not only to the upper Patti of the same name.

The population of the Bhábar is, with few exceptions, migratory, consisting for the most part of Kumaonis who arrive in November and return to the hills in April-May. In the upper portion of the Kota-Bhábar cultivation is as yet unknown, and it is only inhabited by the hillmen who come down to graze cattle. Through the lower Bhábar extensive clearings have been effected and grain of all kinds is grown. The principal crops are rape and millet. The cultivators congregate in temporary villages round their cattle-sheds and usually erect huts of posts connected with grass screens and loosely roofed with grass. Good stone houses are now, however, far from uncommon. They sometimes go as far as the Táraí pargana, where they press oil as servants of the Thárus, whose caste forbid them this occupation, and carry on a trade as money-lenders. *Kath* or catechu is manufactured by the women from the *khair* (*Acacia catechu*), and

wooden vessels for domestic use by a small colony of Munihárs near Barmdoo. There are a few small patches of cultivation near the western boundary of the Tallades upper Bhábar; further west the Chandni and Banbasa *chandas* or clearings commence, which continue with little interruption to the streams flowing into the Rāng anga.

The following tables show the result of Mr. Batten's settlement of the Bhábar and the statistics of the earlier settlements :—

Bhábar.	Number of		Assessment in rupees.					Area in acres in 1846.			Incidence of assessment per acre.	
	Leases.	Villages.	1816.	1820.	1828.	1832.	1850.	Total assessable.	Cultivated.	Culturable.	On total area.	On cultivation.
			Rs.	Rs.	Rs.	Rs.	Rs.				a. p.	a. p.
Tallades.	15	29	.	147	436	409	384	5,757	834	4,923	0 11	6 8
Chaubhainsi.	25	43	...	164	809	949	815	6,259	816	5,214	2 1	16 5
Chhakháta	49	77	123	808	1,623	2,051	2,897	52,023	7,280	54,361	0 10	6 0
Kota	...	45	1,062	3,182	4,322	4,707	4,892	111,344	9,488	48,586	0 8	8 2
Total	134	306	1,185	4,321	7,360	8,116	8,953	175,383	18,447	91,084	0 9	7 9

It is to be remembered that the increase in the revenue is chiefly due to new lands brought under cultivation for the first time and not to enhancement on the land already cultivated. The figures for Chaubhainsi show six new and nine waste villages. These items were land-revenue proper as distinguished from forest dues (*kathbáns*) and grazing dues (*charáí*). These latter for 1846 were assessed as follows :—

	Káil Ku-maon.	Chhakháta.	Kota.	Total.
	Rs.	Rs.	Rs.	Rs.
Kathbáns	...	3,705	1,451	4,600
Charáí	...	2,523	2,650	3,801
				8,973

They give a total of Rs. 18,729, and with the land revenue a total of Rs. 27,682. In Tallades there were a few attempts at

kharíf cultivation, the cultivators coming down to the fields after sun-rise and again mounting to the hills at sun-set ; the night-air between May and October being considered fatal. Still what improvement it showed was entirely due to British rule, for under the Gorkhális there were no cultivated spots at all and few hill-men and fewer plains-men ventured into the tract. In Chaubhainsi care had to be taken to correct the defects of former settlements which left too little to the managers and sometimes ended in default, but the Bargallis of Chorgaliya showed what could be done by judicious selections.

In the Chhakháta Bhábar the difficulties attendant on the distribution of canal water caused some trouble. Here also are some old villages occupied since the time of the Chands, such as Khera Malla, and Talla Dyula and Kuapur on the left bank of the Gaula occupied by Máhras. Malla and Talla Bhamauri and Bhitauriya, Fatehpur and Paniyali on the right bank belong to Sons and Hairis from the neighbourhood of Bhím Tal. Under the former administrations the prosperity of these villages was very precarious, owing to the great insecurity of life and property, which were only partially preserved by the payment of "black mail" to the headmen of the Mewati robbers. When the British rule introduced an improved police administration (though till recently a very defective one), we find the Nayaks and other inhabitants of the Kámgar mountains behind the Gágar ridge descending into the plains, and appropriating the lands next below those above named. To this class belong Mukhani, the two Haldwánis and Kusm-Khera. At the time of their first settlement there was a large quantity of spare water and the great subsequent influx of cultivators into the Bhábar was not expected, the monopoly of the means of irrigation by the Nayaks became excessive whilst, although their rapidly increasing cultivation demanded a more heavy assessment, the revenue of the villages was maintained at *nauabad* or newly-cleared rates. The increase in the demand effected by Mr. Batten still left the incidence of the revenue less than in Kota. In all the upper and central portion of Bhábar Chhakháta the cultivators are hill-men. In the old settled villages the tenure is *bhayachúra* as in the hills, and the several shareholders either cultivate their lands themselves,

or take their chance every season of finding temporary tenants and laborers among the large population, which comes down annually to the Bhábar. In almost all the newly established villages whether of Mr. Traill's time or Mr. Batten's the tenure is *samíndári*, and the proprietary right is vested in the fiscal representative whose family first obtained the lease. Three-fourths of this cultivation belong to the *rabi* season, but in every village there are some fields dedicated to the *kharif* harvest, which are tilled and cared for by *kális* and other low-caste men, who have for some years made the Bhábar their home and have become acclimatised.

Of Kota, Mr. Batten writes:— “The rate of the highest land-revenue demand somewhat exceeds eight annas per acre, and in comparison with the rate in Bhábar Chhakháta the rate is far from low, although Kota for the most part possesses the advantages of a richer and deeper soil, and more easily supplied though not more copious irrigation. As far as any fiscal pressure on the people is concerned, no fear need be entertained, and in Chhakháta and Kota the majority of villages are able to pay their Government revenue entirely from the produce of their rape crops, while others consider the crops of *China* (*Panicum miliaceum*) or the intermediate crop between the spring and rain harvests, as amply sufficient for that purpose; the wheat and rice harvest being, therefore, a source of pure profit.”

So early as the year 1818, the attention of the Board of Revenue was directed to the irrigation of the Bhábar, and in that year they forwarded to Mr. Traill a report by Lieutenant Fordyce on the construction of water-courses, and detailing his experience in excavating one on the road between Bhamauri and Tánda.¹ Mr. Traill had already visited the Bhábar and considered the subject, but had found so many obstacles to the introduction of any extensive system of irrigation that he considered it premature to make any proposals on the subject. The difficulty of procuring tenants and the unhealthy nature of the climate, combined with the uncertainty of the right of the hill-men to draw off the water for their cultivation at the foot of the hills, deterred the landholders from entering

¹ From Board, dated 22nd May, 1818. To Board, dated 14th September, 1818.
From Board, dated 5th January, 1819.

upon the cultivation of the Bhábar, although land of good quality was everywhere available. Physical obstacles also precluded individuals from attempting any system of irrigation which could interfere with the rights of the lowland cultivators. As has already been shown, the mountain streams almost always sink below the surface of the ground on reaching the base of the hills, and only reappear in the Rohilkhand Taráí, and the greater streams which keep to the surface were too formidable for any attempt to control their flow being made. Now, however, irrigation is extensively practised throughout nearly the extent of the Bhábar.

In Mr. Batten's time there was no irrigation in the eastern

Irrigation in 1846.

Bhábar except around Chorgaliya, where the waters of the Nandhaur were utilised. In Bhábar Chhakháta, however, on either side of the Gaula, was a "beautiful line of clearings irrigated by their several *gúls* from that river, and displaying in the spring season a rich sheet of rape and wheat cultivation reaching to about six miles from the hills on both banks, a small belt of jungle, however, remaining in the immediate vicinity of the river bed. This bed is very broad and stony, and during the cold and hot seasons is entirely dry at the fourth mile from its debouche into the plain. This phenomenon would not, I believe, cease to occur, even if the hill-mens' *gúls* had no existence, although the greater body of water then left in the upper bed might enable the stream to avoid absorption for a mile or two further, but certainly not more. Hence although a slight extension of the hill cultivation is prevented by the present wasteful system of separate *gúls*, no injury to any plains parganah arises from the appropriation of the Gaula waters at their head; the nearest plains village (in Rudrapur and Kilpuri) being 12 miles from the lowest possible point of surface flow, and 16 miles from the nearest spot at which (supposing such a water-course could retain its water through the thirsty forest) any canal could be taken off for the benefit of the lower country. These observations are equally applicable to the case of the Bhakra, Bhola, Dabka, and Kára rivers in Kota which on a smaller scale resemble the Gaula. They are less applicable to the case of the Dewa river in Chaubhainsi, because there, as before mentioned, the plains' villages approach those of the hill-men, but even there the engineer

would be a bold man who would undertake to carry the water down to the plains and would despise the risk of ruining the *Bhábar* cultivation and the hill revenue (such as it is) at the head, without increasing the prosperity of the country below. I need only refer to the correspondence on Bhábar irrigation as showing that the hill officers were expected to lay down certain principles for the future management of the head waters. Unless my facts above detailed in allusion to the Gaula river be utterly erroneous, the conclusion arrived at must be that it is henceforth idle to complain in general and loose terms of the monopoly of water by the hill-men. If a body of plains-men, whether Thárus, Bhoksas, or Desis, exist or may henceforth spring into existence, who can beneficially occupy the upper tract *above the point of river absorption*, and by their superior means, skill, and industry cannot only add to the agricultural products of the Bhábar (by the introduction of sugarcane and cotton, for instance), but can also contrive to carry the cultivation to a considerable distance into the forest, then the hill-men should make room for them." * * "Further interference in the shape of a regular enforced plan of irrigation is not barred either by Mr. Traill's orders or the rights which have accrued, but such interference is rendered inexpedient by the fact that no measures of the kind alluded to would so extensively benefit the whole community as to justify the disturbance of present possessions. * * In Mr. Traill's time the *gúls* were divided into those running by day and those running by night. In the present settlement many difficulties were avoided by giving the first refusal of all waste to the headmen of the nearest adjacent villages and increasing the revenue of the latter in proportion ; thus, as it were, forcing the possessors of *gúls* to extend their cultivation in order to prevent the intrusion and probable trespass of new-comers. This plan also tends to prevent the numerous disputes which arise from the paths to the forest pasture : ground long used by the inhabitants of the older clearings being stopped by the new fields of strangers. The actual villages for which separate new leases have been issued are only eight in number, yielding a revenue of 168 rupees, while the new land, brought and likely to be brought into tillage, by means of old existing *gúls* and under the management of old existing landholders, bears a satisfactory proportion to the whole appropriated area."

From 1850 onwards the history of the Bhábar is the story of its management by Sir H. Ramsay, then Sir Henry Ramsay. Captain Ramsay, an account of which will be given as near as possible from the official reports. When Captain Ramsay joined his appointment the Bhábar was overrun by dakaita who were hunted out from the parganahs above Bareilly by Mr. Fleetwood Williams and Mr. Moberly, who fell a victim to jungle fever in the execution of his duties. In 1850, Mr. Thomason, then Lieutenant-Governor, placed the Bhábar in charge of Captain Ramsay with power to expend as much as he could realise in excess of the Government demand on its improvement. To assist him he received a permanent advance of Rs. 10,000, which he was enabled to pay back in a short time by the opening up of temporary irrigation channels, and more especially by taking the entire tract under direct management. The original land revenue continued to be paid into the Government treasury, and in a short time the return from this source alone greatly exceeded the revenue originally fixed, so that by the end of 1852-53 it had risen to nearly Rs. 20,000. All this surplus was invested in canals, and as fast as these were made new villages sprung up corresponding to the supply of water procurable. After the mutiny, Government was induced to allow Rája Shiuráj Singh to exchange the Chilkiya *ilákah* for a confiscated estate in Afzalgarh. This *ilákah* was assessed at Rs. 1,800, and subsequently a few villages were added from Káshipur and Bázipur, giving a total of all transfers of land assessed at Rs. 4,055 a year. The revenue from the Bhábar in 1850 was, as we have seen, Rs. 8,953, but of this sum Rs. 1,911 belonged to the Bhoksa villages of Moti Chakráyat which were turned into waste, and the cultivators carried down to Gadarpur by Major Jones in order that the water which they wasted might be taken to the Tarái, and the cow-sheds along its border, which had no cultivation but which were called villages, so that the people inhabiting them might not have to pay the land-tax. Deducting this amount from the Bhábar revenue the total demand was Rs. 7,042 plus Rs. 4,055 or Rs. 11,097 when Captain Ramsay came into possession in 1850-51; when he left it, in 1883-84, the demand was Rs. 1,80,000. No better commentary on his administration can be furnished than this single fact that the land

revenue has increased sixteen times the amount at which it was fixed when he undertook the charge, i.e., for every anna Government now gets a rupee, whilst the people themselves have been equally enriched and are now as contented and well-off a peasantry as is to be found in British India.

The following table shows the revenue demand for each year during Sir Henry Ramsay's administration, and with the statistics already given furnish a connected view of the fiscal administration of this interesting tract since the conquest:—

1845-46 to 1860-61.

Year.	Rs.	Year.	Rs.	Year.	Rs.	Year.	Rs.	Year.	Rs.	Year.	Rs.
1845-46 ...	9,803	1852-53,	19,390	1854-55,	25,742	1860-61,	27,290	1858-59,	18,987	1860-61,	25,01
1851-52 ...	14,612	1853-54,	22,425	1856-56,	26,631	1867-68,	18,253	1859-60,	24,446	...	...

1861-62 to 1883-84.

Year.	Bhābar.	Chikīya.	Total.	Year.	Bhābar.	Chikīya.	Total.	Year.	Bhābar.	Chikīya.	Total.
1861-62	Rs. 37,535	Rs. 5,597	Rs. 43,132	1866-70	Rs. 74,801	Rs. 16,318	Rs. 91,119	1877-78,	Rs. 86,265	Rs. 27,120	Rs. 1,13,385
1862-63	46,276	5,927	52,203	1870-71	79,922	17,433	97,355	1878-79,	91,700	31,407	1,23,107
1863-64	43,116	7,070	50,186	1871-72	77,622	17,100	94,722	1879-80,	1,02,149	33,036	1,35,185
1864-65	51,742	7,079	58,821	1872-73	74,514	17,928	92,442	1880-81,	1,01,817	34,697	1,36,514
1865-66	40,742	8,009	48,751	1873-74	73,705	19,361	93,066	1881-82,	1,01,475	36,520	1,38,295
1866-67	46,326	11,136	57,462	1874-75	78,846	20,013	98,859	1882-83,	1,07,382	37,123	1,44,505
1867-68	48,341	12,942	61,283	1875-76	80,946	21,546	1,02,492	1883-84,	1,04,046	38,263	1,42,309
1868-69	61,666	15,039	76,705	1876-77	83,343	24,075	1,07,418	...	...	...	...

Irrigation is now systematically adopted and arranged for from the Dewa to the Kosi. All the lakes in the hills are embanked to serve as reservoirs, and all the principal courses (*rajbāhas*) are constructed on a plan to admit of the largest number of distributaries (*guls*) with the least waste of water. Without irrigation the Bhābar cultivation could not exist. There are no water-rates. Every stream almost is used and the water is regulated by sluice-gates placed at the head of each *gul*, and which are opened and shut on a fixed plan, according to the extent of cultivation and the nature of the crop so as prevent over-flooding and its attendant evils. At present nearly 130 miles of masonry channels exist under the charge of the officer administering the Bhābar. We agree with Sir Henry Ramsay that this system should always remain in charge of the Bhābar

officials, and should not be entrusted to the Irrigation Department. Substantial works now exist by which as much water as is required or all that the streams can give is taken off from every river between the Dewa and the Phika. The Gaula system is now as before the most important, and within the range of its influence cultivation will extend as far as water can be conveyed. The land is unlimited and cultivators will always be forthcoming. There is a fair supply until February, when the ordinary volume has to be supplemented from the Bhím Tál and Sít Tál reservoirs. The great rains of 1880 scoured out the bed of the Gaula for several feet, so as to render it very difficult to carry water into the canals, but substantial weirs have since been built to avoid this difficulty in future. Much remains to be done in remodelling the distributaries. Every cubic foot of water per second saved from absorption in the shingly detritus represents Rs. 500 worth of cultivation. Many of the courses (*rājbañās*) should be made water-tight and new lines should be constructed, but each so as to be part of the system above them and of others below that may be required hereafter. By putting the courses a foot or more under the surface they can be increased when required, and the slope is so great that the water can easily be brought to the surface when required. To the east of the Gaula every village is supplied from a water-tight course, to the great economy of the distribution.

Sir Henry Ramsay has found, like Mr. Batten, that the people of Káli Kumaon are not of agricultural tastes, but prefer trading with Nepál and Pilibhít. His experience in trying to induce them to take up the Tallades Bhábar must be told in his own words:—

“I must confess to one failure in the Bhábar. Not that the work was a failure, but the object for which the canal was made never was gained. The Káli Kumaon people (above Barmdeo) are the only bad cultivators in the hills, and in cases of scarcity they used to go down to Pilibhít to purchase grain in May and June. A great many died from jungie fever. I was asked by a great many of the inhabitants of eastern Kumaon to make a canal at Barmdeo, so that the people of the hills above might cultivate as others did at Haldwáni or elsewhere. offers for one hundred villages were given, and I took a canal from the Sárda. After it

was completed and in working order these people would not cultivate, and the canal as far as Kumaon is concerned was useless. In 1878-79, a landslip from the top of the hill about two miles distant came down and filled up two of the lanterns. It also deposited debris to a great depth for some distance over the canal, but as it was at least 15 feet under ground the tube was in no way injured. This canal cost nearly 3 lakhs of rupees, paid for from Bhábar funds. The floods of 1880, which washed away two villages, filled up the lower part with sand, but with the exception of trifling damage the canal is as good as ever. It is arched over for nearly a mile and a half, has an admirable head-work, and might be utilized for Bilhari or Pilibhit. I suggested to Colonel Forbes that the Irrigation Department should take it over on the condition that if hereafter the hill people could be persuaded to cultivate, they should be supplied with water free of tax like the others."

Some account of the principles of management may now be given. Comparing the present with the past Sir H. Ramsay notices the rise of Haldwáni from a group of grass-huts to a substantially built town, with a population of over 4,000 souls. He writes :—"The climate in the Bhábar, thirty years ago, was decidedly bad. In February or March all returned to the hills as soon as their crop was secured. Now the climate so far as the cultivation extends allow a *kharif* cultivation and the people stay down at all seasons without suffering. Most of them have also land in the hills, and they move up and down as their presence is required." In the Chorgaliya direction the climate is not so good and the cultivators not yet acclimatised, but there is excellent land in the hills bordering on it, and when this is fully occupied the overflow must seek the plains. As a rule, new villages are allowed to be held free of revenue for two years that the settlers may clear the

Rents.

jungle and build their huts. The third year four annas a *bigha* is charged, the following year six annas, and then eight annas. With the exception of a few villages the maximum rate is eight annas per *bigha* or three rupees per acre. The cultivators may grow what they like or leave the land fallow, the object being to induce them to cultivate the rain crops, and the idea that they had that free induced a great many to sow rice. Now it has become quite the rule,

as the cultivators have found out what a paying crop good rice is. The most valuable crop in the Bhábar is rape where manure is procurable. The land is prepared in August and the crop is cut in February. *Gandra* (*Panicum miliaceum*) is at once sown which ripens in May. In 1884 there was a splendid rape crop and prices were very high. Those who had land under it roulized Rs. 50 to Rs. 60 per acre, and had the *gandra* crop to supply them with food. The Bhábar produces very fine wheat and excellent sugar-cane. The latter became popular at one time, and a good many Bihea mills were purchased, but they could not be repaired when broken, and the people went back to rape and *gandra*. At present rape is carried away by Banjárs, who collect it at Tanda and other depôts. They sell to Moradabad or Bareilly traders, who again sell to men at Cawnpore and from thence the seed reaches Calcutta. All these middlemen make their profits, but the railway to Ránibág will change all this and bring producer and shipper together.

“The prosperity of the Bhábar cultivation depends on manure and irrigation. Manure means large herds of cattle which are kept on the village lands as long as possible, and after that they are penned on the outskirts of the village
 Manure. as long as they can find fodder. When the

dry weather commences they are driven to the edge of the Tarái where the springs burst out and the grass spring up. Cattle that have paid their grazing-tax in the Bhábar do not pay again when they graze in the Tarái, and in the same way the Tarái cattle that have paid below graze free in the Bhábar. By an arrangement with the Tarái authorities the waste lands on either side of the boundary are kept for grazing. The Tarái Superintendent takes the water of the springs, and the waste land is considered pasture ground. In Chilkiya, cultivation ought not to be allowed lower down than the village of Ampokhra on the Jaspur road or below the present cultivation on the east of the Káshipur (old) road. The country below that is unfit for hill cultivators as water is found very close to the surface.

“The Bhábar has sufficient pasture land and does not require any management on the part of the Forest Department. In fact it would be impossible to close any part of it. As cultivation increases the cattle will have to go further, but however cultivation

may extend, it is limited by irrigation, the jungle will be sufficient. Those district jungles contain no trees of value, as what *haldu* there was in the Haldwáni jungles has been cut by the railway, and the few trees that have been reserved will be required for the villagers. This jungle which is grazing ground must remain under the officer in charge of the Bhábar, and the Forest Department should have nothing to do with its management."

In the villages which existed in 1850 there are proprietors as elsewhere in the hills, but in all others the
 Tenures. tenure is heritable, but not transferable. This prevents gamblers ruining a village by throwing it into the hands of the local usurers. A son is not left a pauper by his father's extravagance, nor is the latter permitted to pledge for his indulgences more than the usufruct. This system works admirably. Troublesome strangers cannot thrust themselves on a brotherhood, and if they come must come as cultivators and intend to remain. In this way the usurer's trade is gone. In Chilkiya, where cultivators from the plains are more common, a tendency is observed on the part of the *sirgirohs* or *padhāns* to oust the hill-men, because they can screw more out of a poor man from the plains than out of an independent hill-man. This practice has to be checked else some day the village will be deserted. In his last report, from which I have quoted largely above, Sir H. Ramsay writes:—"In closing my remarks I will only add that the Bhábar has a great prospect of prosperity. The judicious expenditure of Rs. 50,000 at least yearly ought to extend cultivation steadily. The railway must raise the price of rape and other products. Fifteen years hence the Bhábar will probably yield as much as the whole of the land-revenue of Kumaon and Garhwál put together."

Bhadráj, a hill in Patti Koklyál Thok of parganah Jaunpur in Tihri, lies close to and at the west of Mussoorie forming one of the highest peaks of the range bounding the Dún on the north. The western ridge is prolonged to the left bank of the Jumna, a short distance above its confluence with the Tons. On the eastern prolongation the settlement of Mussoorie is built. There is here a station of the Great Trigonometrical Survey in latitude $30^{\circ}-28'-40''$ and longitude $77^{\circ}-59'-57''$ at an elevation of 7,318 feet above

the level of the sea. Close by is a temple sacred to Balbhadra at an elevation of 7,304 feet.

Bhainskhet, a village, with a bungalow on the route to Garhwal from Almora in latitude $29^{\circ}-42'-0''$ and longitude $79^{\circ}-35'-30''$ is situate in patti Mallá Tikhúu and parganah Bárāhmandal of the Kumaon district. It is distant 14 miles from Almora and 13 miles from Dwárahát, the next stage, and has a Baniya's shop and a bungalow for travellers, without a table attendant or requisites. The route from Almora lies down the north-western slope of the Símtola hill around the outlying spurs of Kalmattiya (6,414 feet) to Háwalbág, where the Kosi is crossed by an iron suspension bridge, about five miles from Almora. Thence the road passes opposite Katármal with its old temple to the Sun and turns west and passing south of the Nágehúla peak (4,457 feet), and thence to the north-west up the valley on the left bank of the Náná Kosi stream with the peaks of Shúra (5,205), Deo Káli (5,067), and Pindar Kot (5,276) on the same side. These with the Nágehúla peak form the outlying spurs of the range culminating in the Pakhán (6,016) and Airideo (6,924) peaks which forms the water-shed between the Kosi and the Náná or Chota Kosi. On the right bank of the latter stream from where the road touches its banks stretches the Pánsú range, attaining an elevation of over 6,000 feet. Near the head of the valley the road bifurcates; that going up the face of the Ryúni hill leading to Ranikhet, while the Bhainskhet road continues up the valley to the traveller's bungalow which lies in a fertile tract, west-south-west of Pindarkot, and has roads connecting it direct with Someswar to the north-east and Ránikhet to the west. On the whole the road is at a low elevation and bare of trees and shade and consequently hot. A path along the range to the right keeps along the side of the ridge and is to be preferred where time is not a matter of importance. About half way along the valley road are three small temples with the curious Turki's cap ornaments at the tops supposed to have been constructed by the Katyúra Rájas about 700 years ago. Similar buildings about ten feet high are found all over the province, and three almost exactly like these, at Tákula on the road to Bágeswar.

Bhainsu, a village and halting-place on the route between Srinagar and Kedáruáth in Patti Talla Nággpur in Garhwal, is situate

some distance from the left bank of the Mandákini river in latitude $30^{\circ}-19'-15''$ and longitude $79^{\circ}-1'-10''$: distant one mile 6 furlongs 22 poles from Rudrprayág, 9 miles 6 furlongs 2 poles from Serabugr and 11 miles 5 furlongs 1 pole from Saur-Gajeli. The road hence to Saur-Gajeli passes on to the Tilbara bridge, level and thence slightly undulating to the Rámpur bridge 6 miles 26 poles from Bhainsu. Hence it crosses the Saurgadh by a 36 feet bridge and by Agastmuni and Nákot to Sauri, where there is an encampment in large fields, 5 miles 4 furlongs 15 poles. The entire road is slightly undulating and an easy march though hot during the summer months from its low elevation.

Bhairon-Ghāti in Tíhri on the road to Gangotri is situate in north latitude $31^{\circ}-1'-50''$ and east longitude $79^{\circ}-56'-0''$, at the confluence of the Jádth-Ganga or Jáhnavi with the Bhágirathi, at an elevation of 8,511 feet above the level of the sea. Hodgson describes it as "a most terrific and awful-looking place;" and describes the *sanga* or spur-bridge mentioned hereafter by Fraser and then existing in terms which justify his regarding the place as one of exceptional difficulty and danger. The *sanga* has now been replaced by a light iron-wire suspension bridge higher up over the Jádth-Ganga, erected by the forest officer, Mr. O'Callaghan. Even this is difficult enough for ordinary travellers, being 380 feet long and 400 feet above the surface of the torrent. It is only three feet wide, and has only a slight wire rope as a side railing. This triumph of amateur engineering stretches across a chasm whose walls are perfectly perpendicular, and has but just level space enough at each end for the piers and abutments. Many of the hill-men themselves have to be led across by others with stronger hands and nerves. Pilgrims to Gangotri and others accustomed to dizzy heights generally crawl across on their hands and knees, the swaying and spring of the light wire ropes suspending the foot-way, making the passage really a difficult one to any one. Mr. Hodgson states that he has never seen anything in the hills to be compared with the scenery around Bhairon-ghāti for horror and extravagance. Both the Jádth-Ganga and the Bhágirathi are here confined within high and perpendicular rocks of solid granite, and in the acute angle formed by the confluence a lofty massive rock projects downwards between the streams like an enormous

wedge. The Jádth-Ganga, the larger stream, is beautifully clear, with a bluish tinge, while the Bhagirathi is of a dingy hue. Hodgson compares this scene of terrific sublimity to "the appearance that the ruins of a Gothic cathedral might have to a spectator within them, supposing that thunderbolts or earthquakes had rifted its lofty and massy towers, spires, and buttresses; the parts left standing might then in miniature give an idea of the rocks of Bhairongháti."

Fraser, too, describes it as a very singular and terrible place.

The course of the river has continued
 Fraser. foaming through its narrow rocky bed, and the hills approach their heads as though they would meet at a prodigious height above. "Here both rivers run in chasms, the depth, narrowness, and rugged wildness of which it is impossible to describe; between them is thrust a lofty crag, like a wedge, equal in height and savage aspect to those that on either side tower above the torrents. The extreme precipitousness of all these, and the roughness of their faces, with wood which grows near the river side, obstructs the view, and prevents the eye from comprehending the whole at a glance; but still the distant black cliffs, topped with lofty peaks of snow, are discovered, shutting up the view in either of the three ravines. Just at the bottom of the deep and dangerous descent, and, immediately above the junction of these two torrents, a wooden bridge (*sanga*) is thrown across the Bhágirathi from one rock to the other, many feet above the stream; and it is not till we reach this point that the extraordinary nature of the place, and particularly of the bed of the river, is fully comprehended; and there we see the stream in a state of dirty foam, twisting violently, and with mighty noise, through the curiously hollowed trough of solid granite, cutting it into the strangest shapes, and leaping in fearful waves over every obstracle. From hence the gigantic features of the mountains may frequently be seen, overhanging the deep black glen; their brown splintered crags hardly differing in colour from the blasted pines which start from their fissures and crevices, or even from the dark foliage of those which yet live.

"Just at the end of the bridge there is an overhanging rock, under which worship is performed to Bhairon and a black stone, partly painted red, is the image of the god. From hence the rock is ascended, at the foot of which the bridge is situated, by a path

more curious, dangerous, and difficult than any yet passed. As the rock is too steep and perpendicular to afford a natural path, the chief part is artificially constructed of large beams of wood, driven into the fissures, on which other beams and large stones are placed, thus forming a hanging flight of steps over the fearful gulf below; and as this sometimes has suffered from age and weather, while the facilities for attaching it to the rock are rather scanty, or altogether wanting, it is frequently so far from being sufficient that it strikes dread into any one not much accustomed to this mode of ascent. Sometimes it is even required to make a leap to reach the next sure footing, with the precipice yawning below; and, at others, with merely the support afforded by a slight projecting ledge, and the help of bamboo hung from some root above, to cling to the rock, and make a hazardous passage. By this unpleasant path a step or level spot is reached on the first stage of the mountain, where, in a thick grove of fir-trees, is placed a small temple to Bhairon, a plain white building, built by order of Amr Singh, Gorkhálí, who gave a sum of money to repair the road, and erect places of worship here and at Gangotri."

Bhatwára, an encamping ground on the route between Kainúr and Rámnagar, is situated in patti Khátali of parganah Malla Salán in Garhwal in latitude $29^{\circ}-48'-0''$ and longitude $79^{\circ}-57'-0''$, distant 9 miles 7 furlongs 23 poles from Bajirau, and 11 miles 6 furlongs 30 poles from Khireri-khál. The road from Bhatwára to the latter place ascends for 1 mile 6 furlongs 30 poles, to where the road to Dharon branches off; thence across the Dīpa-khál into patti Gujara by Kúshár to Sangliya-khál, 3 miles 1 furlong 4 poles. Hence the road proceeds along the ridge separating the Deghát from the Hingwa river, both tributaries of the Rám-ganga, by Tidáli-khál to Khineri-khál, 6 miles 6 furlongs 33 poles.

Bhikal Tál, a small lake of about two acres in extent on the top of the ridge coming down from the Riguri-gudari range to the river Pindar and eight miles above the village of Phaldiya in patti Pindarpár of parganah Badhán in British Garhwal. The lake is surrounded on all sides by dense tree and *ningíl* (hill-bamboo) jungle, and during the winter it gets so little of the sun that ice forms sufficiently thick to bear skating on it. The height of the lake is a little over 9,000 feet. It is not deep and has a soft muddy

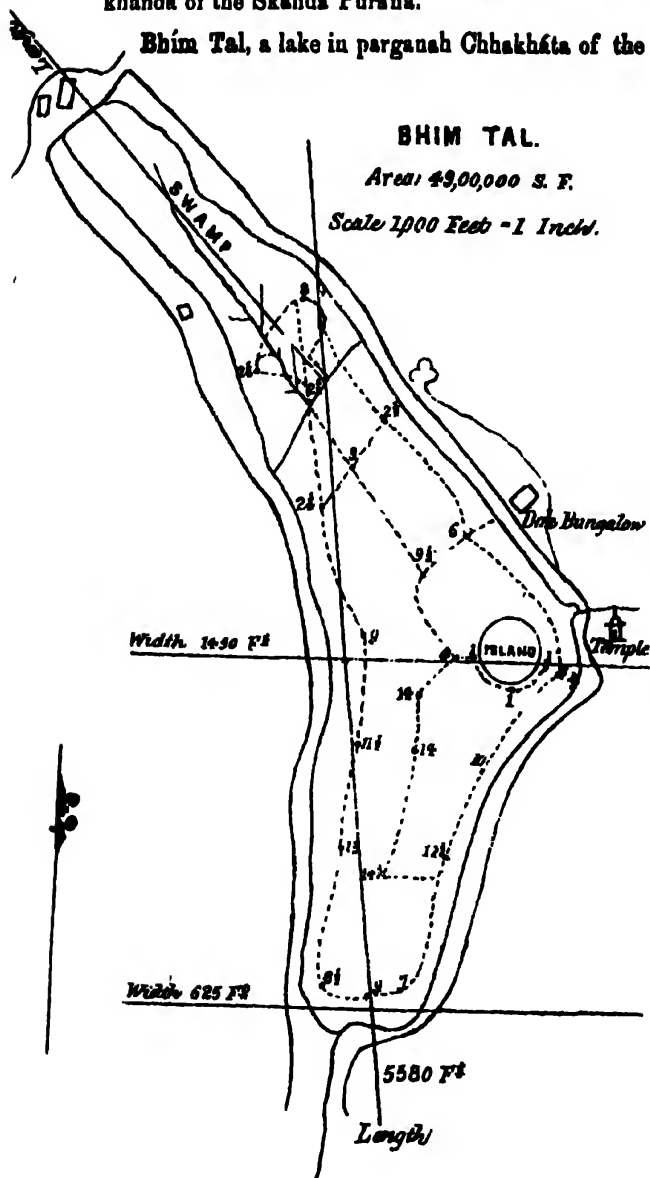
bottom, composed chiefly of decayed vegetable matter washed into it during the rains.

Bherang, a patti of parganah Gangoli in Kumaon, separated from Patti Bel at the recent settlement, is bounded on the north by Baráun; on the west and south by Bel; on the east by the Rám-ganga which separates it from Seti Talla. It lies to the north of the Almora and Pithoragarh road between Gangoli-Hát bungalow and the Rám-ganga. The principal villages are Birgúli, Chitgul, Tihal, Páli, and Pokhri. The assessable area comprises 1,101 *bísis*, of which 593 are culturable and 508 are cultivated (293 irrigated). The land-tax yielded Rs. 117 in 1815, Rs. 205 in 1820, and Rs. 266 in 1843. The assessment is now Rs. 831 which falls on the total assessable area at Re. 0-12-1 per acre, and on the cultivation at Re. 1-10-2 per acre. Revenue-free grants amount to 40 *bísis*. The population at the time of settlement numbered 1,493 souls of whom 793 were males. There is a school at Chaupata and the patwári usually resides in Gangoli-Hát.

Bhikiya (or Bhikiya-ki-sain), a village in patti Walla Nayán and parganah Páli Pachhāon of Kumaon, is situate in latitude $29^{\circ}-42'-8''$ and longitude $79^{\circ}-18'-20''$ at the confluence of the Gágás and Rám-ganga on the left bank of the latter stream, 22 miles from Almora. The road from Rámnagar to Taráí passes through the village where there is a dispensary kept up from the *saddbart* funds of Badrináth and Kedárnáth. Close by is the old temple of Nauleswar, which has more than a local celebrity among those situated at the smaller *prayágas* or junction of streams.

Bhilang (or Bhilangua), a stream rising near the Srikánta peak in Tibri in latitude $30^{\circ}-46'-30''$ and longitude $79^{\circ}-1'-30''$, takes a south-westerly course through the Bhilang patti for about 50 miles and eventually falls into the Bhágirathi river on the left bank opposite Tíhri, in latitude $30^{\circ}-23'-20''$ and longitude $78^{\circ}-31'-0''$ at an elevation of 2,278 feet above the level of the sea. In May at about five miles above the confluence Raper found it between 60 and 70 feet wide. Moorcroft notices the quantity of fish in it taken by spearing. Herbert estimates the length from the source of the Bhilang along the Bhágirathi and Ganges to Hardwár at 150 miles, but 120 miles would be more correct. The Bhilang is one of the sacred

streams and gives its name to a '*khetra*' or tract in the *Kedāra-khanda* of the *Skanda Purāna*.



trict, is distant 12 miles from Naini Tal by Bhimali on the Rāmgār road, whence the path turns off to the east down the Bhim valley, at an elevation of about 4,500 feet above the level of the sea. The view of the lake at sun-rise from the traveller's rest-house is one of the finest scenes of the lake-district. From measurements



Photo-C. 70000. Survey of India Office Calcutta. May 1945

BHIM TAL.

taken by Dr. Amesbury in 1871 the lake is 5,580 feet in length, including the swamp to the north-west: 1,490 feet in width at the widest place, and 625 feet at the narrowest. Its greatest depth is 87 feet and least depth towards the middle 18 feet. The superficial area amounts to 4,900,000 superficial feet. The outlet exists at a natural gap on the north-east close to the temple which has been raised by an artificial embankment¹ about thirty feet to utilise the reservoir so formed for irrigation purposes in the Bhábar during the cold weather. A current sets in for the outlet that is perceptible all over the surface of the lake, and is due to the volume of water carried off especially during the rains. Fish from one to twelve and occasionally twenty pounds in weight are found and afford tolerable sport for both rod and line. The color of the water is bluish-green and very clear, though the lake appears to be subject to the same terrestrial disturbances as Naini Tál. It has, however, the advantage of not being polluted by the surface drainage from inhabited sites, and is in every respect fit for drinking purposes. There is an island close to the north-east side about one hundred yards from the shore with which it is connected during the dry season by a bed of rock and shale. It is about thirty feet high and sixty to seventy feet in diameter.

The hills on the western side of the lake are considerably higher than on the east, and are of such formation that it is highly improbable that the lake can ever dry up. The entire bottom of the lake is comparatively even, and is composed of rock shale and pulverised silicates. Near the swamp end true peat is found which burns fairly when dried. The traveller's bungalow lies in latitude 9°-20'-40" and longitude 79°-36'-16," close to an old temple erected by Báaz Bahádur Chand, Rájá of Kumaon, in the seventeenth century. This temple is a fair example of the ecclesiastical architecture common throughout the hills, and has a wooden canopy (*chhatra*) on the top erected here as an ornament and in some places it is said to preserve the building from rain. There is a dharmasála or rest-house for native travellers to the Bhábar, a school, and a dispensary supported by the Bhábar funds. The valley of Bhím Tál presents one of the largest sheets of cultivation to be found in the hills. Between it and Sát Tál is a flourishing tea-plantation once

¹ Was recently swept away, but has since been repaired.

the property of Government. Nau-Kuchiya Tál lies three miles to the east, Malwa Tál nine miles to the north-east, and Sét Tál three miles to the west, all of which will well repay a visit.

The route from Ránibag (q.v.) lies up the valley of the Barakheri stream which carries off the surplus water of the lake into the Gaula river. The Gorkhális had a fort here, on one of the hills to the south of the lake, known as Chhakháta garhi. According to Mr. Ball the northern range above the lake is largely made up of greenstone, which is traceable from Bhowali to Malwa Tál in one direction, and to Buján on the Kosi in another. The hill, at the entrance to the lake which deflects the in-flowing stream, appears to be a serious obstacle in the way of the theory of a glacial origin for the lake. Mr. Ball thinks that originally the outlet was at the southern end of the lake which appears to be now stopped by the débris of a landslip, and which the natives say will some day give way and swallow up Barakheri. Towards the southern end of the lake, on the eastern side, there is a boulder deposit which extends along the bank up to a level of perhaps ten feet above the water. The rounded blocks which it includes were possibly rounded by the waters of the lake when they stood at a higher level, but its appearance suggests a moraine origin. The most remarkable feature about it, however, is that it is backed by no high range on the east, so that, if derived from a landslip, the materials must have come from the west, and, of necessity, temporarily filled up a portion of the bed of the lake. Hence to Malwa Tál a somewhat rough path gradually ascends an arid quartz mountain of which the last part for about three miles consists of a hard syenitic greenstone. The brow above Mahragnaon, known as the Ekwai Bináyak, slopes south in a richly cultivated talus to Naukuchiya Tál, in part consisting of a green and slate-coloured clay called *kumet*, used in washing walls, &c. Fully two thousand feet below the Ekwai pass flows the Gaula in its narrow and beautiful ravine; beyond this rises a lofty oak-covered spur of the Gagay, with peaks like Deothal (7,957 feet), and others over 7,000 feet in height.

From Bhim Tál a path proceeds direct by Mahragnaon to the Gágay pass and Rámgar travellers' bungalow, twelve miles. This

path joins the road from Bhomali to the Gágár pass on the ridge separating the affluents of the Gaula flowing into Malwa Tál from the Ninglád, an affluent of the Kosi near Khairna. The Gágár peak to the east of the pass has an elevation of 7,855 feet above the level of the sea. The mountain is densely wooded with andromeda, rhododendron, benthamia, viburnum, quercus incana, and dilatata and pine. From the pass there is a fine view of the snows from Badrináth to Panchachúla, and in the foreground are Binsar, Bhadkot, Dunagiri, Siyáhi Devi, and the long blue or in winter white Dudukatoli range which fills the western horizon. A somewhat steep descent leads by a good road and well wooded to the Rámgar (*q.v.*) traveller's bungalow to which water is conveyed in a series of wooden troughs from the pass. From below Jaripáui to the west of the pass and on the north side for 2,200 feet down in the Rámgar valley, the Gágár ridge is composed of syenitic greenstone, with occasional beds of clay and chlorite slate. The greenstone extends eastwards to the foot of Sát-chuliya and westward along the ridge traversed by the road to Bhomali, the flanks exhibiting the greenstone much decomposed into rhomboidal fragments finally merging, as at Sát-chuliya, into the quartzose rocks of Luriyakanta.

Bhotiya Maháls¹ or fiscal sub-divisions of the tract called Bhot comprise the inter-Alpine valleys of the snowy range bordering on Tibet Byáns, Ohaudáns and Dárma on the east, Juhár in the middle, and Painkhanda on the west. These valleys are the main lines of drainage, and along them lie the tracks by which alone Hundes can be reached. 'Bhot' or more correctly 'Bod' is really the same word as 'Tibet.' In the records of the Táatar Liaos in the eleventh century the name is written T'u-Pot'é, in which the latter syllable represents Bod. The Chinese character for 'po' has also the sound 'fan,' and with the addition of 'si' or 'western'; the portion of Tibet to the north of Kumaon is called 'Si-fan' and the

¹ The materials for this notice are an article 'On the Himalaya in Kumaon and Garhwál' by Sir John Strachey, in Cal. Rev., 1853: 'Traill's Statistical Account of the Bhot Maháls': *As. Res.* XVI. (1828): Batten's 'Report on the District of Kumaon': *Set. Rep.* II., 559: Beckett's Reports on the Settlement of Kumaon and Garhwál: *Journals of Capt. H. Strachey, Weller, Manson, Batten, and others in J. A. S. Ben.* information furnished by the District Officers, Colonel Garstin, Colonel Fisher, and Major Beade, and personal observation and inquiry.

people 'Tu-pote'.¹ The Nuniyas of Nári call themselves Náripás and call the Bhotiyas of our hills Monpas. The Khasiya population call the tract inhabited by the Bhotiyas of our hills Bhot, and Tibet itself Hundes, and their own country is known as Khasdes. The people of Tibet give the name Palbo to Nepál, Kynnam to Kumaon, Galdiya to Garhwál, and Chongsa to the Nilang valley. For these reasons, as remarked by Sir J. Strachey, the limits of Bhot in these districts cannot be very strictly defined, for the term is an ethnographical rather than a geographical expression, and signifies rather the tract inhabited by the Bhotiyas which, too, has varied for time to time, than a country of which any positive boundaries can be named. To the north alone can its boundaries be easily defined, and there it is throughout Kumaon and Garhwál one with the line of water-parting between India and Hundes. To the south any boundary that can be named must necessarily be artificial; but it will give a fairly correct idea of the general limits of the Bhotiya tract if we consider it to be bounded by a line passing through or perhaps a little to the north of the great peaks of the Himálaya. In Kumaon the line of demarcation is somewhat clearly defined, but in Garhwál, to the west of Trisúl, the line of perpetual snow recedes some twenty miles north, and the Bhotiya boundary follows it.

The only parts of Bhot which are inhabitable and capable of cultivation are the narrow valleys lying between the great peaks which run down to the south from the water-parting of the chain, and in which flow the tributaries of the Ganges on the west and the Káli on the east. By far the greater part of the tract consists of one great mass of barren rock or of beds of snow with forests of fir, spruce, yew, cedar, box, cypress, and similar alpine trees at low elevations. Though Bhot occupies more than one-third of Kumaon and Garhwál, not more than one-sixteenth of its area is cultivated or cultivable. The villages are all situate north of the points where the rivers cross the line of the great peaks at an elevation above the sea varying from seven to over twelve thousand feet. At the heads of the valleys through which the great rivers or their tributaries flow lie the passes by which the Bhotiyas travel to exchange the products of India and England at the Tibetan markets. The

¹ For the etymology of the name see Gas, XI, 45.

roads' to these passes follow as far as possible the course of the streams, and except where high spurs interrupt the regularity of the drainage and increase the number of the ridges that must be passed, they gradually ascend the watershed of the chain and cross immediately into Tibet. "It would be difficult to exaggerate the badness of the tracks across these passes, for there is nothing to deserve the name of road or even of path, and travelling amongst masses of loose and tumbling stones or over beds of snow and glaciers, and at an elevation where even a slight exertion is painful, is very difficult to people on foot who are not accustomed to such journeys. Toil and discomfort, however, form the principal and, indeed, only difficulties to be encountered, and of the former but little need fall on a traveller seated on the back of a *jubu*, the only way in which it is possible, except on foot, to cross the passes of these mountains with safety. Of danger there is little and the stories³ of the terrific perils that have to be passed through in crossing these passes are entirely fictitious. Accidents from storm and rain occasionally occur, but these would equally happen in any part of the province under similar circumstances, and may be avoided by taking care not to undertake the journey too early or too late in the year. The discomfort, however, that must be gone through can hardly be exaggerated, and no European who has ever experienced the horrors of a Tibetan climate, who knows the wretchedness of a barometric pressure of fifteen or sixteen inches and has convinced himself how little of the sublime and beautiful these elevated regions can show him, will willingly cross these passes a second time unless impelled by objects of scientific research or some other powerful inducement."

There are five principal valleys along which the roads run, and
 commencing from the west these comprise
 Passes. the valley of the Sâraswati, the western
 branch of the Alaknanda in parganah Painkhanda, along which

¹ Trall's report. ² Cal. Rev., No. 35, page 25. ³ These have had their origin either in the distorted impressions of the weak-minded traveller or are due to the bodily suffering which the rarefaction of the air undoubtedly causes. There is hardly more danger in crossing the worst of the Himâlayan passes mounted on a *jubu* than in riding to the top of Snowdon or the Rigi. That is, after the winter snow has melted, and when the weather is favourable, the times usually chosen by the Bhotiyas themselves.

runs the road to the Mána pass; the western Dhauli or eastern branch of the Alaknanda, up which runs the roads by the Níti and Chor-hoti passes; the Gori in parganah Juhúr leading by Milam to the Unta-dhúra and Balchha passes; the Dhauli in Dárma by which the Neo-dhúra and Kachh passes are reached, and the Kuthi-Yáukti or head-waters of the Káli in Byáns leading to the passes known as Lunpiya-lekh, Mankshang-lekh, and Lipú-lekh. The elevation of the Mána pass above the level of the sea is 17,890 feet; of the Níti is 16,628; of the Unta-dhúra is 17,590; of the Lunpiya-lekh is 18,150, and of the Lipú-lekh is 16,780 feet. The mountain chains separating these valleys are in themselves formidable, and in many cases the passes over them are more difficult and dangerous than those leading into Tibet: such are the Lobun-dhúra and Jhuling-Yáukti leading from the valley of the Kuthi-Yáukti to the valley of the Dhauli and having an elevation of 18,900 feet; the Phula-Yáukti pass to the north of the Panchá-chuli group leading from Márchá in Dárma to Rálam in the valley of the torrent of the same name and thence by the Barjikang-dhúra (15,400 feet) to Múpa in the Gori valley; the Gyue-dhúra from Sela in Dárma to Kuthi in Byáns, and the Sobhula and Balchha routes to Munsiyári in Kumaon. A communication between Malúri on the Níti route and Jainti on the Milam route exists by Girthi, but is so difficult and dangerous as seldom to be used. All the valleys, with the exception of that of the Gori, are completely open and passable towards the south.

It is desirable to give some general account of the characteristics of the Bhotiya tract in addition to those already noticed before writing more particularly of the sub-divisions into which it is divided. It has already been stated that the great peaks of the Himálaya are almost always situate near the southern limit of the belt of perpetual snow on great transverse ranges which run down from the water-parting of the chain. Owing to this structure the climate and vegetation, the two most important influences as regards the inhabitants of the country, are entirely different in the Bhotiya tracts from those which we find at similar elevations further south. On the southern side of the great peaks the country is every where within the influ-

ence of the summer and the winter rains of India. We have a damp climate and a luxurious vegetation up to 12,000 feet above the sea, and the line of perpetual snow descends to a height of 15,500 feet above the level of the sea. When we pass to the north of the great peaks, the contrast is most striking.¹ Here we find a dry climate almost beyond the influence of the periodical rains; the magnificent vegetation has ceased, and as we proceed northwards the air and the soil become constantly drier and more arid. The fall of snow as well as of rain gradually diminishes, and as we approach the water-parting of the chain, the northern limit of perpetual snow, under the hostile influence of the climate, recedes to an elevation of between eighteen and nineteen thousand feet above the level of the sea. The scenery of this tract, especially in its more northern portion, is generally desolate and repelling in the extreme. True sublimity can hardly exist without beauty, and of the beautiful there is almost nothing in this dismal region. There is much to cause wonder and astonishment from its novelty, but little to afford delight. Surveying the country from the eminences which rise along the water-parting line a few thousand feet above the passes, we look over the elevated plains of Tibet stretching far away to the east and west and bounded on the north at a distance of some forty or fifty miles by another range of mountains running parallel to the great Himálaya. The scenery here is not without a certain savage grandeur, although the sublimity which we often find in the country to the south of the great peaks is totally wanting. The utter desolation which, when it lay close to us, was only hideous, is here softened down by distance, and the broad grassy plain cut through by stupendous ravines and bounded by the bare brown hills is strange and wonderful. But to the traveller who can look beyond mere external forms for the feelings which natural objects can inspire, this scene possesses a true and an extraordinary sublimity. He knows that the plain over which he looks is the bed of an ancient ocean, filled with the vestiges of the extinct creations of an ancient world, still preserving almost unchanged the level surface although by unknown forces it has been raised up sixteen thousand feet into the midst of the snows of the Himálaya.²

¹ R. Strachey: "On the snow-line in the Himálaya," *passim*.

² Cal. Review l. c., p. 25 (Sir J. Strachey).

The line of water-parting itself attains an elevation of from sixteen to twenty thousand feet, while the
 The Himālaya. Himālaya or groups of snowy peaks of greatest elevation lie to the south of it and are connected with it by lateral ridges. Strictly confining ourselves to the British possessions, we find on the extreme west the water-parting recedes as far north as latitude $31^{\circ}5'$ at Māna, sending out a lateral chain to the south which terminates in the Kedārnāth and Badrināth groups in latitude $30^{\circ}47'$ and $30^{\circ}44'$. The boundary ridge then takes a bend to the south-east to Kamet in $30^{\circ}55'-13''$, whence it sends out a second lateral chain of lofty peaks, the base of which extends as far as Joshimath. From Kamet the ridge recedes to the Nīti pass in latitude $30^{\circ}57'-59''$, from which there is a steady decline to the south-east as far as the Balchha pass, and thence nearly due south to the Lakhur-la beyond Unta-dhura in latitude $30^{\circ}33'$. From this point the course bends slightly to the south-east to the Rālam range, and thence nearly due east by the Lunpiya-lekh in $30^{\circ}29'$ to the north-east corner of the Byāns patti, where it turns suddenly south-south-east to the Lipu pass in $30^{\circ}10'-30''$, the eastern boundary of British Bhot. To the east of the Nīti pass a chain attaining a maximum elevation of about 20,000 feet is given off to the south-south-east separated by the Girthi valley from the Kyungār range running up north-north-west from the water-parting ridge and enclosing between them and the boundary ridge a less elevated tract (15,000 feet) drained by the Girthi river. Further east the Unta-dhura ridge (17,800 feet) runs due west, connecting the group of peaks at the head of the Milam glacier with the water-parting ridge. These again are prolonged to the west in the Dūnagiri peak overhanging the Dhāuli valley, while a ridge running due south connects them with the great mass of peaks including Nanda Devi, Trisūl and Nanda Kot. The western peak of Trisūl lies in latitude $30^{\circ}18'-43''$, and throws out a ridge to the west, connecting it with the Nandakioi group. To the east of the Unta-dhura comes the ridge separating the valleys of the Rālam and the Gori rivers, and further east a chain between the Gori and the eastern Dhāuli, culminating in the group of peaks known as the Pancha-ohūli and extending as far as the Chhipula peak in Askot. Between Dārma and Byāns another chain culminates in Yirgujsjang, which overlooks the

Káli river. Thus we have from the water-parting separating Bhot from Tibet a series of great lateral chains culminating at distances varying from twelve to forty-two minutes of latitude in groups of snowy peaks and having an elevation of from 4,000 to 6,000 feet above that water-parting. These chains have a direction for the most part from north to south, and between them flow the great rivers in the valleys of which lie the villages constituting the fiscal sub-divisions of Bhot. These rivers have already been mentioned in connection with the passes. The other great rivers having their source at the southern base of the snowy range all lie without the tract known as Bhot with which we are more immediately concerned here, such as the Nandákini, Pindar, Sarju, and Rámghanga. The entire drainage of Paínkbanda falls into the Alaknanda, the western branch of the Ganges, while that of Juhár and Byáns falls into the Káli known as the Sáda, where it debouches on the plains, and as the Ghághra or Ghoghra in its passage through Oudh to its junction with the Ganges to the south of the Ballia district in these Provinces. The heights of the principal peaks have already been given.¹ We may here notice the existence of hot springs throughout the Himálaya. The temperature is found nearly the same throughout from 130° to 138° Fahr. No volcano is known to exist and no traces of igneous action are visible, though the natives assert that something of the kind exists on the Nanda Devi peak, and bear unanimous testimony to the occasional appearance of smoke on its summit. This is attributed by them to the actual presence of the deity and has accordingly invested this peak with particular sanctity, but is more probably due to the snow being blown about by the wind. Altogether, though the Bhotiya Maháls form comparatively but a small portion of the great Himálaya, they yield to none in interest. In ruggedness of feature they are not surpassed by any inhabited tract, and such is the irregular and confused appearance which the endless ramifications of the mountains present that it is the line of river-valleys alone that enable us to find a clue to their arrangement, and it is precisely along these valleys that the Bhotiya villages lie.

¹ Vol. I., page 177. See also extracts from the records of the Trigonometrical Survey given in J. A. S. Ben, XXXI., 45, 46. Strachey gives for Kamet latitude 30°-55'-20", longitude 79°57'-55" ; height 25,500 (G. T. S. 25,413).

Painkhanda.¹—The parganah of Painkhanda in British Garhwál consists of two sub-divisions or pattis, the Malla or upper, and Talla or lower. Malla Painkhanda is bounded on the north by Tibet on the east by Tibet and Kumaon, on the west by the Tibri State, and on the south by Nagpur and Talla

Boundaries.

Painkhanda in Garhwál and Malla Juhár in Kumaon. Talla Painkhanda is separated from the Malla Patti on the north by a line drawn somewhat arbitrarily from the Dúnagiri peak through Samangwenta across the Dhauli river, and thence north-west up the torrent of that name to the southern extremity of the range separating the Dhauli from the Sáraswati, and south-west again between Ghát and Vishnuprayág, whence it meets further west the Urgam boundary above Tháin. Malla Nágpur forms the western boundary and Kumaon the eastern boundary. The southern boundary, conterminous with the southern boundary of the Bhotiya tract as now recognised, consists of a line drawn from the western slope of Nanda Devi south-west to Trisúl, thence north-west along the northern slopes of the Nandák peaks, and along the water-parting line between the Biri-Ganga and the feeders of the Dhauli to Sálighát near Pána on the road between Rámni and Joshimath, whence it follows the Garur-Ganga to Pákhi, three and a half miles north of Pípalkoti on the left bank of the Alaknanda river.

The natural divisions of Painkhanda are five the valley of the Vishnuganga, the valley of the western Dhauli, the valley of the Girthi river, the valley of the Ríni, Ríndi or Rishiganga, as it is variously called, and the tract around Joshimath forming the winter quarters of the Bhotiyas. The valley of the Sáraswati

The Mána or Vishnuganga valley. is bounded on the west by the snowy chain separating it from the head-waters of the Jáhnnavi, a feeder of the Bhágirathi, the western branch of the Ganges and ending in the south in the great mass of the Badrináth peaks, including Badrináth, Chaukhamba and Nálíkánta. On the north is the ridge pierced by the Mána pass and on the east a chain of snowy peaks extending from near Joshimath to the northern ridge where it culminates in Kánot. The Sáraswati on

¹ The origin of the name is given in Gazetteer, XI., 784.

either side receives numerous torrents rising in the glaciers that line its course and bears the same name as far as Mána, where it is joined on the right bank by the Vishnuganga, having its source in three immenso glaciers lying to the north of the Chaukhamba and Nálíkánta peaks. Hence the united rivers are known as the Vishnuganga (or commonly Bishnuganga) to its junction with the Dhauli at Vishnuprayág, where it takes the name of Alaknanda to its junction with the Bhágirathi at Deoprayág, when the united streams are henceforward known as the Ganges. The Vishnuganga being more sacred than the Sáraswati gives its name to the latter stream though it itself has a smaller volume and a shorter course, and frequently the name Alaknanda is given to both, above and below their junction, to Vishnuprayág, where they join the Dhauli; and from their sacred character are looked upon as the superior stream, though inferior in length and volume to the Dhauli. To avoid confusion we shall always speak of the united Sáraswati and Vishnuganga as the Vishnuganga. A full description of the valley will be found under MÁNA. The road to Hundes lies through the valley of the Sáraswati and generally on the left bank of the river. The last and principal village is Mána immediately above the junction with the Vishnuganga on the left bank, and about two miles further south on the opposite side of the united stream stands the temple of Badrináth. Laden sheep and goats ordinarily cross the pass in five to six days from Mána, but unencumbered travellers and cattle can accomplish the distance, which probably does not exceed thirty miles, in three or four days.¹ A species of buck-wheat (*Fagopyrum tataricum*, Gaertn., is cultivated between Mána and Badrináth, and but very little of any other grain, for like all the other Bhotiyas the people of Mána take no great trouble with their fields.

The Nítí valley, as the valley of the western Dhauli is popularly called, is bounded on the west by the range already mentioned as dividing it from the

The Nítí valley.

Mána valley; on the north by a continuation of the water-parting ridge separating the Himálaya from the table-land of Tibet, pierced by the Nítí, Tuzum-la or Chor-hóti and the Sheshel passes; on

¹The marches for sheep are Muspáti, Gástoli, Chámráti, Tárú or Tára and Fotí.

the east a spur of snowy peaks runs south-south-east nearly at right angles to the dividing ridge and separated by the valley of the Girthi river from the Kyungár range to the north of parganañ Juhár running north-north-west from the dividing range which here takes a sudden bend to the south before continuing its direction due west to east. On the right bank, the Dhauli receives several glacier streams, including the Ganeshganga, Raikhanda Gamsáli, and Kosa. On the left bank, the most important are the Girthi river, which joins it near Malárl, the Dúnagiri and Tolma streams and the Riniganga, which it receives at Rúdí.

There are two routes by which the valley is reached from the south; one follows the left bank of the Alaknanda by Karnprayág, Hilang and Joshimath, the other crosses the country by Lohba, Náráyanbugr, Ghát, Ránni and Pána. The first is that most generally followed. From Hilang the first march leads to Tapuban (13 m. 3 f. 2 p.): passing by Joshimath (4 m. 1 f. 5 p.); thence to the Raigaon and Kuncha rivulets tolerably level (2 m. 2 f. 16 p.); next, slightly undulating, the road crosses the Chaurmíng and Dhánk rivulets (3 m. 2 f. 14 p.) and reaches the encamping ground at Tapuban in a large flat bend of the Dhauli. Hence to Samangwenta or Suraitota (10 m. 5 f. 32 p.) by the Umyáni and Kanu rivulets (2 m. 6 f. 39 p.), beyond which the old road is merely a sheep track, very rocky, steep, and bad; but the new road is excellent and passable for horses. The Rini river is here crossed by a bridge and the Tolma stream by a *sánga* to Samangwenta (7 m. 6 f. 33 p.) at an elevation of 7,300 feet above the sea level. The next stage is Jhelum above the Garpak stream (10 m. 2 f. 24 p.) The road here first crosses the Dhauli by the Dúmsánga bridge and thence over the Wada-gath and Gádi rivulets, recrosses the Dhauli at Gádísánga and again crosses at Chunch (3 m. 5 f. 17 p.) From Chunch the road keeps to the same bank as far as Maileánga (3 m. 3 f. 15 p.), where it crosses to Khaula, the fifth bridge, whence an ascent leads to Jhelum (2 m. 6 f. 31 p.) From Jhelum (9,301 feet) to Pangti and Bhábkúnd, where the Dhauli is again crossed (2 m. 4 f.), the road passes over the Bhújgara and Malári rivulets to Malári (3 m. 2 f. 29 p.) at an elevation of 10,014 feet. Hence it again crosses by the Búrúns-sánga near Kúrkúti (1 m. 4 f. 3 p.), and

passes along the right bank to Pharkiya (5 m. 6 f. 14 p.) From Pharkiya the Dúmpbu bridge below Bámpa (1 m. 5 f. 12 p.) and Gamsáli (1 f. 2 p.) are reached. Beyond Gamsáli the Dhaulí is crossed by the Búltág bridge to the Jhánti-gath (1 m. 6 f. 3 p.) where the route by Chor-hoti and also by Márchák to the Sholshe! pass branches off. The main road passes up the left bank of the Dhaulí to Níti, the last village in the valley (11,600 feet). Thence the encamping grounds are Kharbasiya (13,655 feet), three marches from Jhelum, and Kyinlung (14,708 feet), from which it is only one march across the pass to the Hundes side

From Jhánti-gath by the Chor-hoti pass the first encamping ground is Húniyakhark (13,500 feet), and thence by Chor-hoti (18,300 feet) to Rímkim (14,250 feet); again a route passes through the Márchák pass (18,600) feet to Hoti (15,000) beyond Rímkim, and from these places it is only one march across the Tun-zum-la or Ting-jung-la (16,350 feet) and Sholshe! (16,390 feet) passes into Tibet. As far northwards as Níti the valley is cultivable and inhabited from June until October; but in no village is there more than one harvest, consisting of barley, buck-wheat, *pháphar*, and turnips, and sometimes these are not gathered owing to premature falls of snow in October. The villages of Malári and Gamsáli especially raise large quantities of grain. The Bhotiyas of Níti though not so wealthy as those of Juhár are still, however, better off than their brethren of Mána and are prosperous in their way. "The capabilities of a real Bhotiya village," writes Traill, "may be estimated as great or small in nearly exact proportion to its vicinity to or distance from the snow; in other words, its prosperity corresponds to the rigor of the climate, the barrenness of the soil, and the impracticability of cultivation; for the more daringly these latter evils are encountered, that is, the nearer the village is to the Tibetan frontier the greater are its trading advantages." (See MALÁRI, GAMSÁLI.)

The uninhabited tract lying along the left bank of the Girthi river, and its tributaries to the north of the Girthi river valley. Unta-dhúra ridge, the northern boundary of Malla Juhár in Kumaon, forms the third natural sub-division of Painkhanda, to which it was transferred in 1864. This elevated region

is divided into two parts by the Kyungár range running north-west from the dividing ridge, and crossed near Jainti (13,600 feet) at a *ghát* having an elevation of 17,700 feet on the route between the Unta-dhúra and Balchha passes. The stages beyond the *ghát* are Kyungár (17,000 feet), Laptel or Laphkhel (13,990 feet), and Sangcha (14,110 feet), whence it is one day's march across the Balchha pass. From Laphkhel a rough and difficult road leads by Tsojan (15,750 feet) to the Shelshel pass into Shák of Tibet. The south-western corner of this tract is occupied by a group of snowy peaks, to the east of which lies the immense glacier forming the source of the western branch of the Gori river.

The chasms through which the Rínínganga or Rishiganga, and the glacier streams which form its tributaries, flow, are situate amid perhaps the most savage and desolate tract in the Himálaya consisting of one mass of, for the most part, bare snow-covered rock, broken into mighty precipices by the numerous streams that pour down from the western sides of Nanda Devi on the east, the northern face of Trisúl and the Nandák groups on the south, and the southern slopes of Dúnagiri on the north. All these mountains are over 22,000 feet high, and Nanda Devi exceeds 25,000 feet. The bed of the river has never been explored for more than six miles from its confluence with the Dhauli, where it comes down more like a waterfall, while the cliffs on either side rise almost perpendicularly to a height of in some places of 5,000 to 6,000 feet. The entire tract as may be supposed is devoid of villages, and only in a few places during the rainy months is used as a pasture-ground for cattle and sheep.

The fifth tract comprises the villages around Joshimath which are situate in comparatively open valleys and gently sloping hills fairly wooded with *chér* (*Pinus longifolia*). Joshimath itself attains to the dignity of a town in the hills owing to the circumstance of its being the winter residence of the Badrináth establishment and of the Bhotiyas from Mána and Níti, whom the rigor of the season compels to migrate to milder regions, and who are the chief purchasers of the grain grown by the villagers, and of the carrier-sheep bred by them among the magnificent pasture-grounds of the ranges which crown their

villages, and stretch upwards to the roots of the snowy peaks. Some of the villages in this neighbourhood are so situated as to afford to their owners great facilities as hunters, and formerly the people derived a good profit from the sale of hawks which they captured in their eyries, and of musk pods extracted from the musk deer which they hunted down by their dogs. *Báz-bína* (hawk's-musk) was a regular item of revenue taken in kind under the native Governments. The musk-deer is now, however, nearly exterminated and hawks are little sought after. Talla Painkhanda is the tract which the late Mr. Moorcroft talked of renting from Government, for the purpose of establishing himself in the best position for profiting by the trade in shawl wool after his return from Tibet.

Juhár, or Jwár.—The pargannah of Juhár in Bhot of Kumaun up to the recent settlement in 1872 was divided into the Malla and Talla patti or upper and lower Juhár. Since then the Talla patti has been divided into patti Goriphát and Talládes. The Malla patti is bounded on the west by Painkhanda Talla, and on the north by Painkhanda Malla of Garhwál, on the east by Hundes and the lateral chain culminating in the Páncha-chúli group separating it from Dárina, and on the south by the Goriphát patti, from which it is separated by an irregular line drawn from the western slope of the Páncha-chúli group by Dhánsi to Palon on the left bank of the Gori river, and thence north-west to the source of the Búgdwár torrent. Goriphát is bounded on the north by this line; on the south by a line drawn from the western slope of the Chhipula peak nearly due west to the range separating it from Askot Malla of pargannah Askot and the Diudhát patti of Síra; on the east by Dárina Malla and Talla, and on the west by Talládes. The Talládes patti is bounded on the north by the southern slopes of the Nandakot Peak, on the west by Malla Dánpur, on the east by Goriphát, and on the south by patti Máli of pargannah Síra. There are but fourteen¹ villages in the upper patti, all situate at elevations exceeding ten thousand feet to the north of the great snowy peaks, and between them and the line of water-parting which forms the boundary towards Tibet. The winter residences of the Bhotiyas are

¹Bilju, Bérphu, Ganaghar, Kbilasch, Laspu, Lwál, Mápá, Milam, Martoli, Rá-lau, Rinkot, Tola, and Sumdu.

chiefly in Goriphát, where the fine slope of the Kálamundi range as far as the Gori river is occupied by the villages of Súrbing, Gorpáta, Daráti, and Dérkot, which together form the tract known as Munshiyári, the principal trade depôt between the passes and Bágeswar. These villages, such as Tejam in Juhár and Lobathal in Gangoli, are remarkably good and contain some of the finest houses in the district. The Bhotiyas have succeeded in obtaining a large proprietary share in the villages, and even in other parts lower down in the patti, and the older Khasiya residents have in some measure become dependent on them for a livelihood. Except in a few of the more elevated villages lying close to the snowy peaks here, too, the people are able to collect two harvests from the soil in a year. Three local pattis, Barukueni, Barupoti, and Tallades, were included¹ in Talla Juhár by the former governments with a view to the establishment of the Bhotiyas during the winter months and still belong to it, and in 1821 were included with the Dárma parganah in the jurisdiction of the Juhár patwari, whose pay on this account was raised from five to eight rupees a month!

The ridge on which the Unta-dhúra pass into Húndes is situated forms the water-parting between the eastern branch of the Gori and the eastern tributaries of the Girthi in Mulla Painkhanda of Garwál. These drain an elevated tract devoid of human habitations, and only used by Bhotiyas travelling to the Balchha and Sholsbel passes into Hundes, and occasionally by the difficult route of the Girthi lead mines to Malári in the Niti valley. South of the Unta-dhúra pass rises the eastern branch of the Gori, whose head waters are principally fed from glaciers lying at each side of the Bhotiya road to that pass. The western branch rises in the great glacier lying to the north-west of Milam, and both unite below Milam to form the Gori. Glacier streams descend from Nanda Dovi and the Laspa torrent from Nandakot and join the Gori on the right bank. On the left bank, the most considerable feeder is the Rálam river, which rushing between the Hansaling (18,100 feet) and Dhánsi (18,200 feet) peaks joins it below Bágdwár. The Gori thence continues on a south-south-easterly course until it falls into the Káli river near Askot. The route to the Juhár Patti lies up the valley of the

¹To Board, 25th April, 1821. In Tallades they were first lessees and eventually became proprietors in places.

Sarju by Bágeswar, thence one road branches off from Kapkot by Ramári on the eastern Rámanga across the Kálamundi range to Súrhing and Lílám, while another branches off from Kháti in the Pindar valley, crossing the Sarju at Jhúni, and the Kálamundi range by the Rur-khán joins the other road near Súrhing.

The Balchha Pass was visited from Untá-dhúra by Weller¹ in 1843, who records that he left the Untá-dhúra Pass at the end of May, and descended over snow-beds to the Lanka stream, which he crossed to the left with a course due north. Thence over a bad road to Topi-dúnga, a small level spot near the river which here joined by the Dol torrent turns to the west with a depth of about three feet and a width of about twenty feet. The Dol rises in a glacier on the western face of the Kingri-bingri range, and after its confluence with the Lanka joins the Torgár to form the Girthi river (q. r.). From Topi-dunga a steep ascent called the Kálamattiya-charháí, from its being covered with dark stones and a black crumbling slate, leads to the crest of the Kyungár-ghát, whence a limited view of the Tibetan table-land is obtained. Thence a descent leads to Chidámu halting place (13,520 feet), a small level spot on the right bank of a stream flowing north; thence to a second halting-place called Laphkhel or Laptel (13,990 feet). About a mile below, the Chidámu stream is joined by the Kiogár from the north which makes its way through a cleft in the hill, the sides of which are many hundred feet in perpendicular height. Ammonites and belemnites are found in great numbers in this locality. Hence the path leads over a series of gentle undulations which extend for a considerable distance on either side. Then, crossing a stream at Sangcha (15,50 feet) the summit of the Balchha pass is reached on the fourth day from Unta-dhúra. See BALCHHA.

In all the passes, but especially in Juhár the tract between the village nearest to the pass and the pass itself is very rugged, difficult, and rocky in appearance, whilst the villages themselves are situate in comparatively open ground. Again the tract immediately below the inhabited part of the valley, or where the river breaks through or flanks the highest chain, and enters the region of forest

¹J. A. S. Ben. 1843, p. 26.

vegetation, is characterized by scenery of the most beautiful, but stupendous character,—snow beds, precipices, and waterfalls, rendering the descent by the river side into the lower regions apparently impossible.

Dárma.—The parganah of Dárma has always been divided into three pattis, Dárma, Byáns, and Chaudáns. At the settlement in 1872 the Dárma Patti was further subdivided into the Malla and Talla or upper and lower pattis. Dárma is bounded on the north by Hundes; on the west by the chain containing the Pánchachúli group and the 'Chhipula peak; on the south by a line drawn from the latter peak due east to the Káli river, and on the east by the chain culminating in Yirgnajung (20,264 feet) separating it from the Byáns valley and Patti Chaudáns. The boundary between the Mallá and Tallá pattis runs along the ridge stretching north-east from the Chhipula peak to Tejam on the right bank of the Dhauli river. The Dárma Patti occupies both banks of

the Eastern Dhauli as far as the western
spurs of Yirgnajung whence it is confined to
the right bank of the river to its confluence with the Káli. Dárma is approached from Barmdeo by Lohughát, Pithoragarh and Askot, from Almora by Pithoragarh and Askot, and from Bágswar by Thal and Askot. From Askot the stages are Baluwakot, Dhárchúla, both very hot, and Khela or Sayálpant, the first important village in Dárma. Khela comprises a large extent of terraced ground formed out of a huge hill side that rises in a steep uniform slope for several thousand feet above the confluence of the Dhauli or Dárma-Yankti with the Káli. The houses and huts are few and mean. Khela has an elevation of 4,750 above the level of the sea, and about 800 feet above the confluence of the rivers. The Khela river forming the boundary between Talla Dárma and Askot has an elevation of 3,794 feet above the sea at its confluence with the Káli. From Khela the route follows the right bank of the Dhauli to Baun (*q. v.*) and Khimling. Talla Dárma, or the lower part of the valley, is more open and resembles the lower portions of the other Bhot parganahs as far as Sobhula, where the Malla Patti commences. Above this, the valley has quite a Bhotiya character, rising gradually as a rule, and in some places somewhat abruptly,

until at Baun an elevation of 11,600 feet is attained. The passes of the Darma valley into Hundes are reached by Dawa and are known as the Kachh-lekh and Neo-lekh or Dhúra. There is also an inter-Himálayan pass to Rálam in Juhár by the Phúla-Yankti from Sipu on the Lissar torrent and to Byáns by the Lebun-dhúra from Khimling. These like all the passes running east and west are only open for a few days during the year. The Dárma Bhotiyas are the poorest and most badly off of all the Bhotiyas, and owing to a murrain which swept off nearly all their cattle in 1846, and losses from avalanches on their villages and roads as well as the contracted nature of their valley, they have not even yet been able to liquidate the debts that they were obliged to contract with their agents at Almora and Barmdeo. During the winter they descend to Askot, Pitheragarh, and Barmdeo, and can therefore collect but one crop in Dárma and Byáns; in Chaudáns, however, two crops are gathered in favourable seasons.

Chaudáns is bounded on the north and west by Dármá; on the north-east by Byáns and on the south-east and south by the Káli river. It comprises the tract on the left bank of the Dhauli river from opposite Baunling to its confluence with the Káli, and the tract lying along the southern and eastern extremities of the chain containing the peak of Yirgnajung to the banks of the Káli. It is altogether only about twelve miles long from north to south, and eight miles broad. The road from Khela in Dárma passes by Sosa under Titalakot to Bungbung (7,500 feet high) about four miles and a half from Titalakot, crossing the Rholing pass (10,000 feet), which is thickly clothed with forests of horse-chestnut that here attain a large size. Hence the road passes on to Gála less than two miles distant. Near Gála the Nirpániya-dhúra or pass is crossed, to the east of which glimpses of the snowy ridges called Namjang (18,500 feet) and Lingam are obtained. These are inferior spurs of the great mountain Api (22,799 feet) on the opposite side of the river Káli. The name Nirpániya is given from the absence of water, but the proper name of the ridge appears to be Gála. The eastern extremity where it is crossed by the road is divided by two shallow ravines into three minor ridges, the first from Chaudáns called the Yirgnachin; the second Birdong, whence there is a good view into the valley of the Káli up to

Budhi, and the third Tiyungwe-bináyak which is the boundary between Chaudáns and Byáns. These differ little in height, and may be about 10,500 feet above the sea. From the Nirpániya pass, a descent of about 300 feet leads to Golám-lá (8,000 feet) about five miles from Gála. It is a mere encamping ground marked by a large gneiss rock overhanging the confluence of the Nájangar and the Káli which is from 1,500 to 2,000 feet below, the declivity between being almost precipitous. Beyond this the Káli is reduced to a gigantic ravine. From Golám-lá the path continues often in steps and rather precipitously around the shoulder of Pommayar, a base-spur from Yirgnajung and thence descends and crosses the Mal-pagár torrent, and ascending the side of Chantirang again descends to the bed of the Káli at Lámári (8,000 feet). From Lámári the path ascends a little and continues along under Yirtashin crossing the Taktigár and Palangár to Budhi, the first village of Patti Byáns.

Patti Byáns is bounded on the north by the dividing ridge between Húndes and Bhot; on the east by the same ridge which here suddenly takes a bend to the south-south-east and by the Káli river which separates it from Nepál; on the west by the lateral chain culminating in Yirgnajung and Patti Chaudáns and on the south by the Káli river. This is the most eastern sub-division of Bhot containing the valleys of the Kutli-Yáukti and the Káli which form respectively the approaches to the three Byáns passes into Húndes, the Luapiya and Mankshang-lokhs on the west and the Lipu-lekh, Dhúra or Thán on the east, the latter leads to Taklakot in the Purang valley, and is by far the easiest of all the passes. In the valley of the Tinkhar river on the eastern side of the Káli are a few Bhotiya villages subject to Nepál which are completely isolated by snowy peaks on the east and south from Nepál, and are altogether, except politically, a portion of Byáns. Up to the Gorkhali conquest of Kumaon, Byáns belonged to Jumla of Nepál and was annexed through the Rájbar of Askot to Kumaon in the last decade of the last century.

The approaches to Byáns are the same as those given for Dárma. From Khela of Dárma the road continues along the right bank of the Káli to Budhi, the first and only sub-alpine village of Byáns situated at an eleva-

Itinerary.

tion of 9,070 feet above the level of the sea on the right bank of the Pālangār stream above its confluence with the Kāli. Immediately above Budhi a steep ridge advances from the mountain side on the north-west and extends across the valley, leaving but a narrow passage for the river. The summit of Chetu-bināyak is then reached after an ascent of about 1,750 feet by an easy path and thence the entrance into upper Byāns.¹

The first village in upper Byāns is Gārbiya or Garbiyang (10,320 feet), close to the Kāli river. The houses here are two stories high quaintly and closely studded with poles erected for ornament or most probably from some superstitious motive. A little beyond stand the remains of the village of Chhindu, the rest of which has been swept away by the river. The base of this valley is formed by an accumulation of old alluvium and débris from the surrounding mountain sides in strata of considerable aggregate thickness and loose consistency, through which the river appears to have cut its present channel, three or four hundred feet below the site of the present villages, and to the great danger of those which are too near its bank. The Chetu hill above Budhi is in fact the abrupt termination of the elevated bed of detritus, forming to the south an acclivity of 200 feet or more in vertical height; to the east and north-east where the river breaks through it appears in cliffs and landslips many hundred feet high.

From Gārbiya the path descends to the bed of the river and crosses by a bridge a little above the confluence of the Tinkhar, a large stream not much inferior to the main body of the Kāli coming in two branches from the east and north-east. A little above the bridge and on the top of a steep bank, is the village of Changru (9,900 feet). The Kāli now turns abruptly to the north-west through a steep rocky mountain defile, whilst the path follows the left bank to Gungi (10,310 feet) at the entrance of the Kuthi valley. From this valley there are two passes to Rākās Tal, the Lunpiya, and Mangshang, which are considered not more difficult than the Līpu pass. There was formerly another pass from the neighbouring district of Mārma

1. The authority for this description is principally Captain H. Strachey's Journal (*J. A. S. Ben* XVII. (2), 527). See also Rākās Tal, Mānasarovar, Furung, Kailās, for the tract to the north.

in Nepál ; but this has now become impracticable, and the people come through Byáns. From the confluence of the Tinkhar the road follows the valley of the Káli ; to the right is Kelirang, supposed to be presided over by Byáns Rikhi or Vyása Rishi, the reputed author of the Mahábhárata. Close by are the uninhabited hamlets of Jákti and Siti, belonging to the Gárbiyals which appear to have suffered much from landslips. Hence by Talla and Malla Kawa 'Nepálese hamlets' the Kuthi road crosses the Káli, the smaller branch of the river from the north-east by a small *sánga*, 150 yards above its confluence with the Kuthi-Yáukti, which is the larger branch from the north-west. The Káli here has a bed 150 yards wide, but contracting into much narrower limits a mile further up, and the stream in September is all but fordable, though in the height of the rains it, sometimes, swells so much as to carry away the bridge here, and the road then has to cross higher up. The name of the Káli is said to be derived from the Kálapáni springs, erroneously reputed the source of the river, but in fact unimportant tributaries merely : and both are so called from the dark colour of the water, but even in this respect the Káli is exceeded by the Kuthi-Yáukti. This eastern Káli, however, is now the actual boundary between the British and Nepálese territories, and, according to the Bhotiyas of the place, has always been so.

We now enter on a fine expanded valley of considerable length through which flows the Kuthi-Yáukti or Kuthi valley. western branch of the Kali. At the lower end the flat and habitable, if not cultivable, land must exceed half a mile in breadth, consisting of alluvial detritus similar to that at Garbiya. On the right bank of the river is the village of Napalchyu situated on the Per-Yaukti, a deep *gár* or stream coming from Namjang the second of that name, a snowy peak to the south-west. Two miles beyond Napalchyu on the left bank is Nábbi, a village like the others with a large expanse of cultivated fields, and opposite to Nábbi on the right bank is Rúnkaag on the Dangnung-Yáukti, which comes from the Rúnkaager, a snowy ridge on the south-west, through a deep ravine dividing in two the mountain side. A pass across the Rúnkaager, now dangerous and disused, once led into the Pálan-

gir valley below Budhi. It was by this route that Rudrpál, Ráj-bár of Askot, entered and subdued Byáns and annexed it to Kumaon under the Gorkhális. The Dangnung is a good sized stream with several wooden bridges across it for the use of the villages on either bank. There is also a bridge across the Kuthi between Rúnkang and Nábbi. Two miles more along the river bank leads to Mangdang, a small level under the Chhachala peak opposite to which is Relakang, a hamlet belonging to Nábbi at the foot of a low hill spur which advances into the valley from Sháng-doli, a mountain thickly clothed with pine and birch. Half a mile from Mangdang the road crosses the Náhl-Yáukti, a small stream proceeding from the mountain of the same name. On the opposite side of the river is the Ganka, a glacier stream of considerable size and velocity. Here the valley contracts, leaving little or no level ground at the bottom of the slopes of the inclosing mountains. On the left bank are the Nampa and Shakshiram *gáras* or streams proceeding from the mountains of the same names, and several glacier and snow torrents. On the opposite side are the Selaséti and Khárkulum torrents.

As the road approaches Kuthi, the mountains on the left bank recede a little, and then curve round with a fine sweep to the northward, enclosing a good expanse of tolerably level ground around the village of Kuthi. On the right bank the Pechto river comes through a deep ravine from a glacier under Gyuk-dhura, by which there is a pass into Sela of Dárma still used. Before reaching the Kuthi village, the Hikong is passed, coming from a glacier under the snowy peak of Kariya through a very deep channel in the low ground of the valley which here, as lower down, consists of deep accumulations of *débris* from the surrounding hill sides. The houses in Kuthi are wretchedly built, consisting of two or three storeys resting against the hill side. Beyond this the Híúure, a stream like the Hikong proceeding from the Gunye peak through a deep ravine, is utilised for turning water-mills (*gháto*). Kuthi, the highest inhabited site in the valley, has an elevation of 12,330 feet above the level of the sea. The mountain sides around have a scanty covering of a poor brown grass with a little juniper and *dáma* or goat's thorn (*Caragana*

pygmaea) to the height of a thousand feet or so, above which is bare rock and thin snow. On the other side of the river, the mountains throw out some inferior spurs of hill, on which are scanty birch trees degenerating to mere shrubs, and the highest of them not 500 feet above the level of the village. This valley is so shut in by lofty mountains that the sun does not show his face until some two hours after the proper time of his rising, and apparent sunset is premature in the same degree, so that the length of the day is much curtailed, which the climate of the place can ill afford.

From Kuthi the route across the Lunpiya-lokh into Hundes
 The Pass. descends and crosses the river by a *sanga*,
 and a mile or two further crosses the Mang-
 dang rivulet. The valley here narrows to a mere open glen, the
 path one or two hundred feet above the river gradually rising and
 the mountains on either side decreasing in relative height. The
 Toshi-Yānkti, a considerable stream,¹ nearly as large as the western
 branch of the Kuthi river, enters the main valley here from the
 north by a very large ravine. Beyond this is the ridge of Sang-
 chūngma at an elevation of 13,900 feet. Hence the path continues by
 a very easy ascent over the same sort of undulating berm on the hill
 side that prevailed before and then crosses the Nikūrch rivulet and
 again the Jhūling-Yānkti, up which is the pass by the Lebūn-
 dhūra into Khimling of Dārma. Jhūling (14,350 feet) is the usual
 halting place between Kuthi and the foot of the Lunpiya pass.

From Jhūling another stream is crossed passing through
 Byānksāhiti, a small pool which tradition says had the name of
 Mān-talao, given to it by a former Raja of Byāns, who also called a
 peak of no great importance close by Kuilās, after their great proto-
 types in Hūndes. Thence the Rārūb-Yānkti is crossed, which consists
 of one or two rivulets flowing through a remarkably wide and level
 bed that looks much like an extinct lake with a single small exit
 into the Kuthi river. Beyond this in September the snow entirely
 covers the ground wherever that is level enough to retain it; it re-
 mains tolerably deep in hollows and on the northern slopes, but well
 frozen and hard enough to afford fair footing to man and beast.
 After a march of eight miles, Phīsmangbu or Walshiya, the name

¹ Entered as Kcmbelchoo in the old maps.

given by the Bhotiyas of Byáns to the *dakhnd* or foot of the pass, is reached at an elevation of 15,750 feet above the level of the sea. The Kuthi river here consists of a small divided stream winding through a wide and level bed.

From Phiámangbu the stream of the Kuthi, here shallow and half frozen, is crossed, and the path ascends the mountain side to the northward. The valley now comes to an end, further progress would appear impracticable except by scaling the hills on either side. Captain H. Strachey writes:—"The Kuthi-Yáukti rises not far off to the westward in deep beds of snow by reason of which the head of the river appears to be quite impracticable. The road, however, lies over a moderate acclivity, but completely covered with snow, which goes on increasing to an unpleasant depth. The glare is intense; the surface of the snow is frozen and hard enough to afford tolerable footing to a man on his own feet; but the cattle sink deep at every step; when only knee-deep they get on though slowly, but when the snow meets their chests, it is with the utmost difficulty that they can gain a step, being also exhausted by the rarity of the air which here affects both man and beast." Two thousand feet is Strachey's estimate for the vertical height from Phiámangbu at the bottom of the pass, and the horizontal distance is only four miles; the absolute elevation of the pass is 18,150 feet. Captain Strachey adds that it appeared to him to be something inferior to Unta dhúra and Jainti of the

Juhár pass. The prospect from the top of the pass was obscured by clouds, and nothing worth notice was seen in any direction. "The imagination of the novice in these scenes usually anticipates wonderful prospects from the lofty summits of the Himálayan passes, the natural and political barrier-wall dividing two great kingdoms, from which the eye hopes to range one way over terraces of mountains descending to the plains of India, the other over vast expanses of Tibetan tablelands. Such views are hardly to be realised from the passable gorges of the Himálayan crest whence the prospect is interrupted by obtruding shoulders of higher mountains. What nature can afford of panoramic sublimity, the traveller may see from the heights above Shák on the road from Laphkhel to Dangpu, and the

most exacting imagination might hardly be disappointed with that glorious view; some part of that is to be seen from the Níti pass, the only one that admits of any tolerable prospect into Hundes; from the top of the Lakhar over Chhirschun I (H. Strachey) had some faint and narrow glimpse of the distant Gángri mountains. The place of encampment at the foot is called by the Bhotiyas Lunpiya, *dakhna* or *walshiya*; by the Huniyas, Láarcha it is near the head of a valley which rises from the Byáns Himálaya to the south eastward, and running for a few miles north-westward, turns east of north into the valley of the Satlaj. Upwards nothing but pure snow is visible, downwards a few symptoms of bare rock, as the valley expands; and the mountains on either side subside into hills, and through the opening northward is a glimpse of distant blue mountains, part of the Gángri range. The descent from the Lunpiya pass opens into this valley from the southward; the top of the pass is not visible from the *dakhna*, being hidden by the lower declivities, which are rather steep." Therm. 9 A.M.,—October 1st, 29°.

It only remains to describe the route from the Lípú-lekh pass to Gúnji to complete the topography of Byáns. Following the same guide who crossed it from Húndes in October, 1846. For three or four miles from the *dakhna* at the northern side of the Lípú pass the road is fair and straight along a tolerably easy ascent, so that, starting in the morning, the summit is easily reached by noon. Captain Strachey writes:—"Seven or eight hundred vertical feet of the summit was pretty well covered with snow, but this was for the most shallow and well frozen, or where otherwise, so beaten down by the traffic of men and cattle, as to make a very good path, over which we travelled without any difficulty. The sun was shining bright, but the passage of snow was not long enough to entail any injury from the glare, though that was of course considerable. The rarefaction of the air was sensible, but in no way distressing to any of us except the ponies, who seem to have very little endurance in this matter. Lípú-lekh, like most of the other passes, does not command any extensive prospect. I saw nothing but low, ugly-looking, snowy ridges on all sides, a partial glimpse of Gurla, and a spur of bare hills down below in the direction of Taklakhar. The descent down

the south-west side of Lípu was long but not steep, with much the same quantity of snow as on the north-east side. The road, fairly made or naturally good, follows the right bank of the Káli, which rises in water courses under the pass. There is no vegetation here except grass and small herbs. Next reached Yirkha, which has one house and a few fields, on the right bank of the Káli, just above the confluence of a large stream coming through a deep ravine from the westward. Kálapáni bridge some way lower down is 11,760 feet. Lípu-lekh must be passable for the next month or two, if no fresh snow should fall in the interim; indeed, I can readily believe the passage might be effected safely even in the middle of winter, if not over severe, only with proper arrangements and precaution." Hence the road crosses over the left bank of the Káli under Yirkha, a mile below which is a good-sized stream coming through a deep ravine from the eastward, with plots of cultivated ground at the confluence, very similar to Yirkha; thence recrossing the river, the road lies over a great landslip which for some years past has quite obliterated the former hot-spring of Kálapáni. The name, however, has been transferred to another spring further down on the left bank of the Káli (to which the road crosses again), but the water here is neither black nor hot, nor in any way remarkable. Below this the valley begins to expand, and gives room for Shangdama, a very pleasant little flat on the left bank of the river, beautifully planted with pines and close below Shangdama, is the hamlet of Kawa whence Gúnji is reached.

The means of communication are sufficient in number, and efforts should be directed to improving those
 Communications. that exist by bridging the torrents, clearing the tracks from the detritus of avalanches (*húnra* or *ru*), and constructing shelter houses in favourable situations. Practicable tracks connect the main lines with each other, leading over the ridges that intervene in parts offering the least difficulty, but in the upper patts, as a rule, passable only for a few days in each year and at all times difficult and dangerous.

"These bye-roads," writes Traill, "and, indeed, all roads follow the bank of some river or stream as far as possible, and only deviate from it, as a last resource, where a rocky precipice, impassable by other means, presents itself. Obstructions of this nature, which are here frequent, are, if feasible, avoided by means of

bridges; or are surmounted by the aid of a scaffolding formed of spars, and supported by joists, fastened horizontally in the face of the rock, an expedient, which however is only pursued where natural crevices or ledges are available. Where a passage over the obstruction is inevitable, a considerable detour is usually necessary for that purpose, and the road, in these cases, is always difficult, and sometimes attended with danger. The bridges are of the *sanga* kind; and being intended for the passage of laden animals, they are made with greater attention and better materials than are commonly given elsewhere to such erections. In the early part of the season natural bridges of snow, formed from the accumulation of avalanches, abound, more particularly in the upper part of the passes, where the stream is invisible during much of its course. The frequency of mountain slips (*paíra*) renders the preservation of the road an object of constant toil to the Bhotiyas. By accidents of this nature, the course of the river is sometimes completely blocked up for two or three successive days, and every part of the pathway within its reach, is swept away by the accumulated torrent, not an atom of soil, being left on which to found a new road; on forming the latter a deviation from the old line and level becomes necessary in consequence. The passes, taking their whole extent, may be said to be barely practicable. The Bhotiyas travel through them without difficulty under burthens, but natives of other quarters of the hills are compelled, in many places, to proceed with the utmost caution, even without loads; at such points animals of every description require the assistance of manual labour; the larger kinds, such as ponies and cattle, are raised or lowered according to the nature of the obstruction, by means of slings passed round their bodies. Comparatively speaking the Niti is considered as the best, the Juhár as the most difficult pass in this province. A tradition is here current that when Bhot was originally conquered by the Kumaon power, a road was formed by the invading army to facilitate its progress through the pass; this operation, the commander (Raja Báz Bahádúr Chand) is said to have personally superintended, paying a rupee with his own hands for every cupfall of earth brought to the spot." During the rainy season to insecurity under foot must be added insecurity over head. Fragments of rock and avalanches are frequently detached from the impending cliffs, and annually occasion fatal accidents in each of the passes.¹

In the absence of a regular series of observations the notes of
travellers as to the climate and temperature
Climate. is all that is available:—

Miram, May 28th, 4-20	A.M., 49° in shade—W. ¹
Do. do. 1-30 P.M., 77° in tent—W.	
Do. do. 5-55 P.M., 59° in air—W.	
Do. 29th, 4-30 A.M., 35° in tent—W.	
Do. Sept. 24th, 8-0 A.M., 37° in shade—M.	
Do. do. 12-20 P.M., 66° in shade—M.	
Foot of Balchha, June 1-4-20 A.M., 31° in tent.	
Unta-Dhura, May 29th, 9-15 A.M., 61° in sun.	
June 3rd, 8-17 A.M., 39° in shade.	
Sept. 24th, 3-10 A.M., 39°—M.	

¹W stands for Weller; M. for Maunson.

According to Traill :—" Generally during full half the year the surface is wholly covered with snow ; this begins to fall about the end of September, and continues to accumulate to the beginning of April. Thaw then becomes predominant, though partial falls occur till even late in May. In open and level situations, unaffected by drifts or avalanches, the bed of snow which at its maximum depth varies in different years from six to twelve feet, is wholly dissipated by the first week in June ; in ravines and hollows, it does not entirely disappear before the middle of July. The seasons of spring, summer, and autumn are comprised within five months, from May to September inclusive ; but an interval of four months, without a fall of snow, is rare." The thermometer ranges during summer at sunrise from 40° to 55° ; at noon, from 65° to 75° in the shade from 90° to 110° in the sunshine. Towards the middle of August, the temperature becomes precarious, and the weather subject to sudden and severe changes, which the natives suppose are accelerated by any concussion in the air, such as that produced by the discharge of fire-arms or loud musical instruments ; and much precaution is observed to prevent the occurrence of such concussions. Heavy rains sometimes fall : Webb, during his visit in the beginning of June, found them to continue for seven nights and six days without intermission.

The houses are commonly large, consisting of two or more storeys substantially built of stone, with sloping roofs of slate or *deodár* planks, or earth and gravel beat smooth. Where this last material is made use of, a previous layer of brick work or boughs is requisite to render the roof water-proof. In the choice of a site for building, security from avalanches forms the primary consideration ; but even the greatest foresight sometimes proves vain. In 1822 more than 20 houses were swept away by an avalanche in the village of Mána, although it is, at least, two miles distant from the peak whence the destructive mass must have proceeded. Sometimes, when a suitable cave is found, the Bhotiyas make it their home by throwing out a verandah in front. The dress of the male sex consists chiefly of woollen stuffs of home manufacture. It

generally resembles that worn by the inhabitants of the pattis lying further south and consists of the usual coat (*anga*), trousers (*paijama*) and cap (*topi*). The Bhotiyas of the Dárma parganah invariably wear woollen boots reaching nearly to the knee and soled with buffalo hide. These are composed of stuffs of different colors sewn chequer-wise ; in the western valleys, the boots are of plain woollen stuff. In the same valleys, the Juhar Saukiáni or female Bhotiya wears a woollen plaid which she wraps around herself in the same way as Hindu women of the plains wrap a *sári*. She eschews skirts, but fastens her plaid over her bosom with a large pin, and gathers it in at the waist with a woollen belt. It is not considered immodest to leave the face unveiled, but they are learning fast this custom from their intercourse with the plains. In Dárma, however, the women retain a dress fashioned after that of the Huniyas. "This," writes Traill, "consists of a web of cloth folded round the body, and descending from the waist to the ankles in the form of a petticoat, at the waist it is secured by a girdle, commonly of leather; above this is a shift without sleeves, reaching below the knee; while above all is a narrow hood fixed on the top of the head and covering all but the face, showing a tail descending down the back nearly to the heels; a pair of boots, similar to those of the men, completes the equipment. The above articles of dress are all made from woollen stuff, dyed either red or dark blue, having narrow white stripes. The ornaments of these ladies baffle description, and bear no resemblance to anything worn elsewhere: the most prominent are the ear-rings, commonly of pewter, which in size and shape may be compared to a massive house-door key. Strings of large pieces of coarse amber are worn round the neck in addition to two or three necklaces. The Bhotiyas of both sexes and of all classes in every pass carry suspended from the waistband by small chains or thongs of leather, a variety of instruments of daily use, such as knife, spoon, scissors, awl, packing needle, tweezers, steel, flint, tobacco pouch, &c.

The Bhotiyas consume large quantities of food, particularly flesh, of which a constant supply is afforded to them in the carcasses of their sheep and goats, which die of fatigue or disease. They eat flesh half raw or

cooked, and are fond of boiling it with rice, but do not first wash or clean the rice, as they say that this would prevent its being properly cooked. They parch barley and then grind it, with the result of a sort of *suttu* which they use chiefly in their journeys mixed with water, as oatmeal is used in Europe. The better classes of the Garhwál and Juhár Bhotiyas abstain from the use of beef of every description, but the Nilang Jádhs to the west and the Dármas and Byánsis on the east eat the flesh of the yak. All Bhotiyas drink spirits, both European and native, as well as that made by themselves, and in extenuation of the practice plead necessity from the nature of the climate in which they live, and the arduous and fatiguing character of the journeys in which they are constantly engaged. When collected together in any place they have frequent drinking parties, which are continued during the whole night, and sometimes kept up even for the ensuing day. Intoxication with them does not, however, lead to riot or disorder. The liquor in use is of two descriptions, *dáru* or whiskey, produced by distillation and *jan*, obtained by simple fermentation: the latter is the favorite beverage. Both are procured from rice: to hasten the fermentation dried yeast (*balma*) reduced to powder is added: a few hours only are required to render the *jan* fit for use. The *balma* is prepared from the meal of barley or other coarse grain on which an infusion of the berries or sprigs of the juniper in water is made to filter: the dough is kneaded, and when ready dried in small cakes for keeping. The Bhotiyas do not follow the observances of the Hindus in the matter of food cooked without *ghí* and with *ghí*, and take each without distinction at the hands of all except Doms. Still, slowly and surely, they are becoming Brahmanised, and already imitate in many minor matters the tedious ceremonial prescribed by the customs of the plains.

Traill represents the Bhotiyas as an honest, industrious, orderly
 Character. race, patient and good-humoured, but very
 filthy in their habits, using the skirts of their

Dress to scrub both their persons and their cooking utensils. In this trait they are only surpassed by their neighbours the Huniyas. They have most of the virtues and the vices of the people of the lower hills, but they are superior in energy and industry, and

perhaps in general intelligence. The heads of the Bhotiya villages often remarkably sensible and well informed ; their mode of life gives them more experience of the world than the people of the hills generally possess, and they take a much greater interest in matters not immediately affecting them than is commonly found amongst eastern people. Their intelligence is entirely the result of their own observation and experience ; they seldom possess any education beyond the ability to read and write and to keep rough accounts of their trading operations, but of what they may become we have an example in Pandit Nain Singh, the great explorer of the Trigonometrical Survey, and his fellow-travellers, several of whom were Bhotiya residents of the Juhár valley. To this we may add Sir H. Ramsay's testimony :—"The old race, among whom Debu, (who assisted Moorcroft), Huguru, and Fateh Singh were well known, have passed away, and none of the present generation can exercise the power and influence they did : but the Juháris are decidedly the most intelligent and most wealthy of all the Bhotiyas. Dhanu is a very enterprising man, and Máni,¹ son of Debu, is patwári of Dárma. He and Máni, son of Fateh Singh, Dhanu Janpán, and Gyáni, son of Huguru, are now the leading men amongst the Juhári Bhotiyas." Still the Bhotiyas want the natural politeness of the Hindus of the plains, and are often churlish and rough in their demeanour towards other natives. Theft is hardly known, and on moving downwards on their annual migrations they bury within their houses their more valuable metal utensils. In Juhár they say that he who commits larceny amongst the Páñchachuli hills shall surely die because of it.

Including under the name Bhotiya only those who are clearly not Khasiya, it cannot be doubted that they are of Tibetan origin. Their

language alone is almost sufficient to prove this, and the unmistakable peculiarities of

feature that belong to the Mongolian race are as strongly marked in the Bhotiya as in the Huniyas across the frontier. The traditions current amongst them, too, help to confirm this opinion.² The Bhotiyas themselves, however, do not admit their Tibetan origin. They state generally that they are a Rájput race who dwelt

¹ He assisted the Schlagentwelts in their journey.

² See the story of the

colonisation of Juhár in *Gaz.* XI., 455.

originally in the hill provinces south of the snowy range, and that they migrated to Tibet, whence, after a residence of several generations, they again crossed the Himálaya and established themselves in the districts which they now inhabit. The traditions of the different valleys, though differing in detail, agree in the main outlines of the story. That this tradition is not of very modern origin appears certain, and it is possible that it may be true, for the existence of Rájput colonies in Tihet at a very early date is recorded in histories both Tibetan and Chinese. The Bhotiyas have, however, lived so long amongst and mingled so much with the Tibetans, that they themselves possess now no claim to be recognized as of Indian origin. The traditions both of the Bhotiyas and of the inhabitants of the country further south uniformly declare that the Bhotiya districts were once subject to the adjoining province of Tibet. No records exist by which the question might be decided, but there appears to be no reason to doubt the fact, and that the present occupants are descendants of the original Tibetan settlers.

The results of the several enumerations of the people are given elsewhere. The Bhotiyas of Mána and Níti are called Márchas and those of Juhár as known as Sokpas or Ráwats. The Ráwat ances-

The people
tor of the Milamwáls obtained permission from the Gartoh chief to establish himself in trade and built Milam, Búrphu, and Mápa, and received a grant of *chún-pal* (*jagdt*) from the Huniyas. The Márchas and Sokpas eat and drink and intermarry together, and there are no real differences between them. Both alike look down on the Bhotiyas of the Dárma pattis, and neither eat nor intermarry with them. Although the almost constant intercourse which the Bhotiyas maintain with Hundes and their yearly residence for a considerable time in that country cause many of their habits to assimilate to those of the Huniyas, yet, with the exception of the people of the Dárma parganah and Nilang, the general customs of the Bhotiyas approximate much more nearly to those of the natives of other parts of Kumaon and Garhwál. They certainly pay comparatively little attention to the distinctions of caste, and they do not scruple to eat and drink with the cow-killing people of Hundes. The Bhotiyas of Juhár¹

acknowledge only two castes, Brahmans and Rájputs. They know nothing of the sub-divisions known as *gotra*, *sákha*, and *pravara*. Some who derive their origin from the Ráwats of Garhwál (*q. v.*) say they are of the Kaunsil *gotra*, and others who declare themselves Bhatta of Benares affect to belong to the Kausika *gotra*. They do not wear the sacred thread, but adopt the uncut tuft of hair (*sikha*) as all Hindus do. They will eat half cookery *kachehi rasoi*, *i.e.*, food cooked without clarified butter from any one not a Dom contrary to the custom of most hill Hindus who have no scruple, however, in eating such food if dressed with clarified butter (*pakki rasoi*) whoever the donor may be. They also disregard much of the etiquette of eating observed by other classes calling themselves Hindus. Thus they often enter their *chauka* or cooking circle without washing their feet or taking off their coats, and eat their dinner in the same clothes that they wore at breakfast, and they are not particular whether they eat their food within or without the cooking circle.

The principal clans of Bhotiya Brahmans in Juhár are the Dobedhiyas, Páthaks, Karákhētis, Nauragís, Polcháls, Upádhīyas, Darmolas, and Nágilas. Amongst the Rájputs we find Janpánis and Toliyas, said to be immigrants from Jumla in Nepál, Mártolīyas, who claim to be Bhatta from Benares, those named after the villages of Birju, Búrphu, Milam, Namjal, Sain, Rilkoṭ, Chulkot, Ringu, Laspa, Lwál, Dhamigaon, Saináthi, Khilaunch, Máni, Ghorhphata, Dhápa, Rálan, Harkhot, Páparha, also Panktis Nitwáls, Mahtas, Aspawáls, Kunkiyas, Shumtyáls, Támákyáls, Joshyáls, and Bhotyáls, with a similar village origin. There are no Brahmans in the Dárma Pattis. In Dárma Malla and Talla we have septs of Rájputs named after the following villages:—Bauwáls from Baun, Dúgalwáls, from Dúgtu also from Lámá, Philam, Chul, Shípu, Shaun, Dur, Jumku, Butun, Marcha, Go (Gwáls), and Dántu, besides Jumála, Kanáris, Shawaláls, Nogatyáls, Gargwáls, &c. In Byáns there are Rájput septs named after the villages of Gárbya, Tinkhar, Kuthi, Chhalma, Nábbi, Napalchyu, Gánji, Budhi, &c. The people of Chaudáns are called Chaudásiyas.

The Bhotiyas of Mána are called Márchas and this name is equally applied to the people of the upper villages of the Níti valley. They eat, drink,

Garhwál Bhotiyas.

and intermarry with the Juhári Bhotiyas, but not with those of the Dárma parganah. Like the Juháris they do not know of *gotra* *śakha* or *pravara*, though some say they are of the Bháradhváj *gotra*. They observe some of the Hindu ceremonies, but not the *upanayana*, nor do they wear the sacred thread. They choose their purohitas when necessity arises from Dimris, Hatwáls, Duryáls, and Dádís. The inhabitants of the villages not occupied by Bhotiyas in the Mána and Níti valleys are called Duryáls in the former and Tolchas in the latter. These are of Khasiya origin and affect in turn to consider the pure Bhotiyas as an inferior race, whilst they themselves, from their intercourse with the Márchas, are rather lightly esteemed by the Khasiyas of the southern parganahs, and all unite in assumptions of superiority to the natives of Tibet, though on their annual visits to that country they are compelled to drink tea at the houses of their several correspondents, such ceremony being there an indispensable preliminary to every commercial dealing. The principal other clans are the Juháris, immigrants from the Juhár valley; Molapas who call themselves Bhattas from Benares; Nítawáls; Jhelamwáls; Dhamaswáls; Bampwáls; Námphas; Barwáls; Phoniyas; Mádyas; Bhátarjyas; Pankhotis; Dhárkholis; Kalkholis; Burphwáls; Gad-yáls, and Bhurkulyáls. There are Khyúrásis from the lower pattis: Konkyas who are servants and some Doma.

To the west the Bhotiyas of Nilang in Tihri are called Jádhs.

Jádhs of Nilang. Like the others, they were originally Huni-yas from Tibet, but have now a large admix-

ture of Garhwáli and Basáhiri blood, due, in a great measure, to the former practice of purchasing slave-girls from the poorer Garhwális. This custom was stopped by Mr. F. Wilson on the part of the Raja of Tihri. The girls were not bought ostensibly as either wives or concubines, but merely as servants to aid in the house and field, and living in the houses of their masters and eating with the family, were well treated, and comfortable. Though these girls, Hindus, often of a fairly good caste, are not supposed to intermarry with people of a different religion, yet the natural result of their close association with their masters, combined with a low standard of morality, is the gradual admixture of a Garhwáli element with the Basáhiri-Huniya Jádhs stock. Even when manumitted some

preferred to remain with their masters, the only difference being that they can now leave if they choose. Mr. Kinney writes¹ :—" In dress, manners, and customs, the Jádhs follow pretty closely their Huniya ancestors. They drink as freely as the pure Tibetans, both *chang* and also a spirit which they themselves distil, and which the Huniyas do not drink ; they are also very fond of European spirits, and will do a good deal for a bottle of whisky or rum. They eat yak's flesh but not cow's. In religion they are professedly Buddhists, but practically are as much mixed in this respect now as in descent, and can hardly be said to belong to any particular religion. When in Tibet amongst the Huniyas, they conform to all their religious observances ; when in Basáhr, some portions of which are Buddhist and some Hindu, they accommodate themselves to the opinions prevailing around them ; when in Jarhwál they pay reverence to all the numerous hill deities, and when at home, in their own village, they appear to trouble themselves very little about religion at all."

The form of religion professed by the Bhotiyas has been naturally influenced by their peculiar situation and pursuits, subject to a government which, as regards the infringement of its religious tenets, was ever intolerant. " The Bhotiyas," writes Mr. Traill, " have been compelled to conform with the Hindu prejudices ; continued intercourse with the latter sect has also led to a gradual adoption of many of its superstitions, while the annual communications maintained with Tibet have served to keep alive the belief of their forefathers. The Bhotiyas may now be regarded as Pantheists, paying equal adoration at every temple, whether erected by Hindus or Bauddhas. The only temples in *Bhot* are small rude buildings erected with loose stones, merely sufficient to shelter the idol. Among the Dárma Bhotiyas divination is practised ; the omens are taken from the reeking liver of a goat or sheep, sacrificed for the purpose, by ripping up its belly. No undertaking of importance is commenced without this ceremony ; when the first augury proves unfavorable, fresh animals are sacrificed, and further inspections made ; the result of the majority of omens decides the question. The office of divi-

¹ Mr. Kinney, Rep. G. T. S., 1877-78.

ner appears to be assumed indiscriminately by all males of good age ; certain previous purifications being undergone on each occasion." There is no doubt that of late years the Juháris have affected more and more to imitate the scrupulous caste observances of the Hindus and have assumed the affix ' *Sinha* ' to show their Rájput origin. They refuse, too, to drink spirits, of which they consume large quantities, out of the same vessel with a person whom they consider to be of an inferior class, and altogether they have as much right as the Khasiyas of the less civilised parts of these districts to be considered Hindus in religion. Strict puritanism is impossible in the tropics and similarly strict Hinduism is impracticable in a cold climate, and the respect which the Bhotiyas show to the religion of their Tibetan neighbours may be derived as much from the tolerant opinions which Hindus generally profess as from any traditional reverence for what was probably their ancient faith. In Garhwál the favourite deities are Ghantakarn or Ghandyál,¹ Mátá Murti,² Bampanág,³ and Acheri,⁴ to whom they offer goats and buffalos and afterwards eat them. In Kumaon the favorites are Kiwán, a sort of Himálayan Hercules ; the deity who dwells on the Panchachúli peaks ; Deo or Runiya,⁵ a malevolent spirit ; Sáin, the benevolent spirit of an ancient Sáin or hermit who, when the Bhotiya has lost one out of his flock or herd, appears in the form of a man and leads the owner to the spot where his lost one will be found. Siddhuwa and Biddhuwa are the names of two harmless goatherd brothers, who are supposed still to take a benevolent interest in their former profession, and are invoked when a goat falls sick or is lost ; Bír Singh and Jammu Dánu are the sprites of two remarkable Dánpuris ; Látu Bálohan and Acheri.

The Bhotiyas, as a rule, are more particular in their marriage observances than in their other ceremonial usages. Strange as it may appear, all through the Bhotiya tract, the inclinations and will of the female appear to have greater weight than is common in the east, both in regard to the formation of such engagements, and in the subsequent domestic management. Contracts are formed at an early age, but the marriage is not commonly concluded till the parties arrive at

¹ Gen. XI. 816.² *Ibid*, 782.³ *Ibid*, 325 ⁴ *Ibid*, 322.⁵ *Ibid*, 331.

maturity. Should the female in the meantime make a choice for herself, the previous contract is compromised by the payment of a sum of money. The consideration given by the bridegroom to the father of the bride varies from three hundred to one thousand rupees : a corresponding portion is returned, which consists of domestic stock, live and dead, and in some of the gháts is considered as the property of the wife, by whom it is managed for her own benefit. The females are chiefly employed in weaving blankets and coarse serges, but they will not work in any company except that of their nearest female relatives ; even an aunt and a niece will not work together. The produce of their looms is, in a great measure, at their own disposal. The Bhotiyas construct a house called Rambáukuri, in which marriages are arranged. Such buildings are generally shared by several villages and are placed at a spot about a mile or half a mile distant from each. Such bachelors and maidens as wish to marry resort there without either relatives or chaperons. They remain there together some twenty to thirty days, taking their meals in company. At the end of that time, a mau engages himself to the partner who has pleased him best, and the happy pair go home, assemble their relatives, call in the priest, and are married. During their residence at the Rambáukuri, the pair sing amabæau songs together. If the woman conquers in the vocal contest, she takes the man off to her house and marries him there ; if, on the other hand, the man gains the victory, they are married at his house. This custom of the Rambáukuri is less common in Jubár and Byáns than in Dárma. In none is child marriage the fashion. But a person whose star was in the Lion at his or her birth is not allowed to marry a person whose star was in the Goat at his or her birth. Except amongst the Brahman Bhotiyas there is no objection against the second marriage of widows, whether the widow has children by her first marriage or not. Children by a first marriage who follow the mother to her second husband's house lose their paternal inheritance, but are entitled to succeed to their step-father's property equally with their step-brothers of the second marriage, his children. If a woman desert her husband and goes to live with another man, her husband takes from that man the costs of a second marriage ; the woman is thereby divorced from her first husband and becomes the wife of her

seducer. If she, in turn, deserts the second man for another paramour, he can take from the third man the costs of a marriage, and the woman for the third time changes husbands. But some injured husbands renounce their rights to take the costs of a second marriage from the seducer of their wives and refuse ever afterwards to see their wives again. Under such circumstances the woman is considered to be divorced as regards her husband and to be unmarried to the co-respondent. But the marriage is held to be of an inferior kind resembling the *sagdi* of the plains, and is sometimes, indeed, not considered a marriage at all.

The relatives of a widow's first husband receive a sum of money (varying in amount, but never above Rs. 200) from the second husband upon her re-marriage, and if her first husband left no kinsmen, her parents take this fee. If there are no parents, it is taken by the widow's maternal uncle and son, it being arranged that the unlucky bridegroom must pay the fee to some one. All this happens if the widow is given away or sold to her second husband. Where she chooses a second husband for herself no fee is paid. The ordinary course for a woman when her husband dies is to go and live with her deceased husband's younger brother as his wife. If the younger brother is too young for matrimony, she generally looks out for another husband or is sold to another by her kinsmen, as already described. There are, however, some widows who shave their heads after the death of their husbands and go on pilgrimage, and never marry again. It should be mentioned here that what has been written about the remarriage of widows amongst the Juhāri Sokpas applies equally to the re-marriage of all the ordinary Khasiya Rājputnis and other low-caste women in Kumaon.

Where a parent dies, the Juhāri Bhotiya abstains from flesh and other rich food for ten or twelve days.

Funeral ceremonies.

On the anniversary of the death, however, instead of the usual *śrāddha* ceremonies he performs what is called *dhornī*. A gash is cut in the neck of a young male buffalo, who thereupon, of course, runs away; he is pursued and ultimately killed with sticks, stones, and knives, and any one who pleases may eat of his flesh. The mourner then gives clothes or cooking vessels to his Brahman directors, usually Dobediyas or Bhattas : for, in the hills, there

are no Mahábrahmanas, and their place is taken to a great extent by the lower classes of Brahmanas. Bhotiyas of the better class sometimes think it necessary to abstain from flesh for a year after the death of a father, mother or elder brother, and to abstain from curds for the same period if a father dies, and from milk if they are mourning the loss of a mother. But this practice is by no means universal, and most Bhotiyas adopt the more sensible course, for their work and climate, of limiting the actual period of fasting to ten or twelve days. In Garhwál, they collect the bones of a deceased parent that remain at the pyre, and within the year convey them to a pool near the Satapanth glacier above Badrináth and throw them into the water. To them this water has all the virtues of Gya, the great *Srddha-tirtha* of the plains. It is also customary in Garhwál that a widow on the death of her husband abandons all her jewellery and finery and wears only the *bharela* and a blanket until she takes another husband. Similarly the husband, on the death of his wife, abandons the *langoti* or *dhoti* until he takes another wife.

The Bhotiyas burn their dead. In Dárma, it is the custom, no matter when the death occurs, to perform the funeral ceremonies in Kárttik only. On the occasion of a death, the heir of the deceased is expected to entertain the whole of the brethren and is consequently impoverished by the extravagant expenditure indulged in. A number of goats and yaks, according to his means, are sacrificed at the pyre; of the latter animals one is selected for the particular service of the deceased, and is previously led about with many ceremonies, adorned with flowers and laden with cloth, sugar, spices, and such articles; precedence in the sacrifice is also given to it, and the decapitation is performed by the son-in-law, or some other near relation to the deceased. In the selection of this yak the departed spirit is appealed to, and its choice is supposed to be indicated in the animal which is the first to shake its tail when the stall is inspected by the heir. The Bhotiyas universally profess extreme veneration for the *manes* of their forefathers; small monuments to their memory are numerous in the vicinity of villages, generally on the summit of some height; distinguished individuals are further

honored by images of silver or stone, and by the annual celebration of festivals, on days dedicated to the purpose, when the image is carried in procession about the village, and receives offerings and worship. Among the Dárma Bhotiyas, when an individual dies absent from his native village, a clue of worsted is conducted to it from the spot where death occurs. In families of consideration the thread is extended unbroken throughout; by the poorer classes, it is only laid, in cases of considerable distance, along difficult parts of the road; the object of this superstition is to enable the departed soul to join the spirits of his ancestors. *Satts* occasionally took place in Juhár in former times.

As already noticed, the Bhotiyas place little reliance on the products of the soil as a means of livelihood.

Agriculture.

The cultivated land in the upper pattis yields but one harvest in the year. The soil contains much vegetable matter washed down by the melted snow and is of a dark colour. It would, however, appear to require considerable quantities of manure to render it productive, and the surface of the ground is further encumbered with stones and boulders, which render its cultivation laborious and difficult. The local produce is insufficient to supply the Bhotiyas with food. For grain they have to depend in a great measure on their winter habitations in the more southern pattis. In the richest and best watered lands, barley there returns a yield of from twenty to forty-fold according as the temperature may be affected by the nearness to the snows. In poor, unirrigated, lands three to six-fold is the average. Sowing takes place in Chait-Baisákh and the harvest in Kuár-Kárttik. The principal other crops are *kotu* or *ogal* or *pálti* (*Fagopyrum esculentum*); *pháphar* or *bhe* (*F. tataricum*) and *chúsa* or *márcha* or *mársa* (*Amaranthus frumentaceus*), and in the upper parts *pháphar* only which does not require irrigation, and yields from thirty to forty-fold. Turnips (*chaukan*), leeks, and potatoes are the only vegetables cultivated; of those growing wild, the rhubarb is somewhat inferior in its color and properties to the Turkey, and the Bhotiyas do not take it inwardly. It is used in the form of a powder for bruises, and with madder and potash as a red dye. Madder (*manjit*) is abundant, but does not form an article of commerce. Apricots and peaches have been introduced by the

Bhotiyas, but they do not attain to any size or flavor. The forests in the south and least elevated parts afford timber common to the other parts of the province. Deodár to the south, horse-chestnut, red rhododendrons, oaks and pines attain a large size. To these succeed white rhododendrons, king pine, yew, juniper, and on the verge of perpetual snow, birch and the goat-thorn (*dáma*). The bark of the birch is used for paper and other domestic purposes and is exported to the plains and the twigs of the juniper are used in the preparation of yeast (*balma*). The following list gives the local names of the commoner trees and plants: see further, however, the account of the forests in the first volume:—

English names.	Hindi and Bhotia name.	Scientific name	Remarks.
Lofty pine ...	<i>Ráisalla</i> ; Bhotiya <i>lam-shung</i> , <i>lim</i> .	<i>Pinus excelsa</i> .	
Webb's fir ...	Bhotiya <i>woman</i> ...	<i>Abies Webbiana</i> .	
Cypress ...	<i>Saru</i> ; Bhotiya <i>tang-shin</i> <i>tím</i> .	<i>Cupressus torulosa</i> .	
Yew ...	<i>Thuner</i> ; Bhotiya <i>nháre</i> (Byáns) <i>idat</i> (Juhar)	<i>Taxus baccata</i> .	
Birch ...	<i>Bhoj</i> ; Bhotiya <i>Shakshin</i> .	<i>Betula bhojpatra</i>	
Rhododendron...	<i>Baranj</i> , <i>bárdas</i> ; Bhotiya <i>takshin</i> .	<i>B. campanulatum</i> .	
Bambu cane ...	<i>Pol</i> (14,000 feet) ...	<i>B. anthopogon</i> ...	Used as incense in Tibet.
Sycamore ...	<i>Ningála</i> ; Bhotiya <i>hwey</i> , <i>Kamiya</i> ; Bhotiya <i>án-shing</i> .	<i>Arundinaria falcata</i> . <i>Acer caudatum</i> .	
Walnut ...	<i>Ahhrot</i> ; Bhotiya <i>áas-shin</i> .	<i>Juglans regia</i> .	
Goats thorn ...	<i>Déms</i> ...	<i>Caragana pygmaea</i>	
Cedar ...	<i>Deodár</i> ...	<i>Cupressus deodara</i> .	
Ground cypress,	<i>Perpinja</i> , <i>padma</i> (Niti); <i>Churpanja</i> (Mána); <i>khála</i> (Byáns), <i>chí cháya</i> (Mílám).	<i>Juniperus communis</i> .	
Juniper ...	<i>Padbaná</i> ; Bhotiya <i>páma</i> (Byáns), <i>bíl</i> (Mílám)	<i>Juniperus recurva</i> .	
Ground rasp- berry	Bhotiya <i>sinjang</i> , fruit <i>sinjang lho</i> .	<i>Rubus nutans</i> ...	Orange fruit.
Barberry ...	<i>Chotra</i> ; Bhotiya <i>kachi-shin</i>	<i>Berberis aristata</i> ...	Worthless.
Little willow ...	Bhotiya <i>tárua-chah</i> ...	<i>Hippopháe rhamnoides</i>	Yellow acid berries.

English name.	Hindian and Bhotiya name	Scientific name.	Remarks.
Gooseberry ...	<i>Lepcha</i> ; Bhotiya <i>gal-dam</i> (Byána), <i>sir-gochi</i> .	<i>Ribes grossularia</i> ...	Worthless (10,000 feet)
Crab apple ...	<i>ban-mekul</i> ...	<i>Pyrus baccata</i> ...	Ditto.
Currant ...	(Red) Bhotiya <i>mdngle</i> (Byána) Bhotiya Dongole (black) <i>durbui</i> .	<i>Ribes glaciale</i> ...	Small in sipid.
White dog-rose, red.	Hindian and Bhotiya <i>ger-sephala</i> .	<i>Rosa serica</i> ...	Large hips.
Orchis ...	<i>Sephala</i> ... Bhotiya <i>phung</i> ...	<i>R. Webbiana</i> . <i>Satyrium nepalense</i> ...	Pink flowers; roots eaten.
Viburnum ...	<i>Gaiyah</i> Bhotiya <i>koto-bla</i> .	<i>V. cotinifolium</i> .	
Monk's wood ...	<i>Nurbui</i> ; <i>atta</i> (14,000 feet.)	<i>Aconitum heterophyllum</i> .	Root used in medicine.
Wormwood ...	Bhotiya <i>pankima</i> ...	<i>Artemisia</i> .	
Wheat ...	<i>Gekhan</i> ; Bhotiya <i>nd-phal</i> .	<i>Triticum vulgare</i> .	
Celestial barley,	<i>Nejan</i> ; Bhotiya <i>chama</i> .	<i>Hordeum himalayense</i> .	
Barley ...	<i>Jau</i> ...	<i>H. hexastichylum</i> ...	Red flowered.
Buckwheat ...	<i>Ogal</i> ; Bhotiya <i>palsi</i> ...	<i>Fagopyrum esculentum</i> .	Yellow ditto.
Amaranth ...	<i>Phaphar</i> ; Bhotiya <i>bhe</i> , <i>Chaa-mdra</i> ...	<i>F. tataricum</i> ... <i>Amaranthus frumentaceus</i> .	Red. White.
Turnip ...	<i>Kedari-chaa</i> ... <i>Shalgam</i> : Bhotiya <i>chaahan</i> .	<i>A. caudatus</i> . <i>Brassica rapa</i> .	
Tobacco ...	<i>Tamaku</i> (Byána) ..	<i>Nicotiana tabacum</i> .	

"The operations and implements of husbandry," writes Traill, "present no novelties; the ploughing commences as early as the melting of the snow will admit, and the sowing is commonly completed by the first week in June. By the middle of September the crop is ready for the sickle; to this period the irrigation of the wheat and barley is continued, the streams of melted snow being directed for that purpose whenever available. Severe winters, attended with heavy snows, prove more or less injurious in their consequences to the succeeding crop. The Bhot villages are all situated on the northern side of the great chain of Himalayan peaks, and are all, in some degree, subject to the influence of its snows and of its shade.

By any unusual accumulation of snow on the summit the inferior bed is forced down, and with it, the influence of, if not the line of, perpetual congelation itself, descends ; those villages which are contiguous to the peaks, and are unsheltered by intervening heights, suffer severely from such occurrences, as it sometimes requires the heat of more than one summer to throw back the snow to its former level. The village of Laspa, in the Juhár pass, has been rendered wholly unproductive during two years by an accident of this kind. The Bhotiyas of Dánpur, Juhár, Dárma and Byáns have a peculiar way of cutting their wheat and barley. They nip off the ears with a kind of shears called *runya*. Their cattle are then driven in to eat down the stalks and the men tread out the corn themselves, and do not employ bullocks for the purpose.

We have already stated that language, physical traits, customs, and tradition all assign to the Bhotiyas a
History. common origin with the people of Hundes.

In all except the Dárma parganah the Bhotiyas trace their origin to some village in Tibet. The story of the colonisation of Juhár has been noticed and their Sokpa origin determined. The people of Dárma, though equally of Tatarian origin, are said traditionally to be of a different race, who entered the hills from the plains. According to Traill, they are considered to be descendants of a colony of Mughals who were left to secure possession of Kumaon after its subjection by Timúr. This force, thinned by disease and the sword, ultimately retreated to Dárma, and there made a permanent establishment. Timúr, however, never approached Kumaon nearer than Hardwár, and his stay there took place in 1398 A. D., a time for which we have fairly accurate traditions, none of which refer to the conquest of eastern Kumaon. It is said also that the local rule of these Mughals lasted for twenty years, and that to them we are to attribute certain remains at Dwárahát and Bágeswar consisting of rude tombs constructed with large flat tiles. Similar remains are found further west in Kulu, and have already been noticed,¹ with the result that we cannot connect these remains or the Dárma people with a colony left by Timúr. The Dárma Bhotiyas also repudiate this story, but from difference in language, customs, and appearances they undoubtedly belong to a tribe from Tibet

¹ Gazetteer, XI. 512; the Dárma Bhotiyas are probably Khampas and not Sokpas.

other than that to which the other Bhotiyas belong. The Bhotiya mahals belonged to Tibet up to the time that Garhwál became consolidated under the chiefs of Srínagar and Kumaon under the Chands. Báz Bahadur Chand¹ reduced Juhár in 1670 A. D., but it was not until the Gorkháli administration that Dárma was wrested from Jumla of Nepál and annexed to Kumaon. But in becoming subjects of the cis-Tibetan States, the Bhotiyas were by no means drawn from their allegiance to the parent state, but still continued to acknowledge the supremacy of both : an anomalous state of subjection which their paramount interests in continuing to be the medium of commercial intercourse between India and Tibet tends to perpetuate. One of the first acts of our Government was to surrender all dues on trade which amounted to a considerable sacrifice of the revenue hitherto paid by the Bhotiyas, and the taxation which they are now called on to pay is comparatively trifling. But the Tibetan authorities have from time immemorial subjected the trade to regulations and restriction of all kinds, nor is their interference limited to the imposition of customs-duties. A remnant of the old state of things when the Bhotiya valleys were subject to Tibet is kept up in the Tibetan demand for dues other than customs-duties, which, though insignificant in amount, are held to be an acknowledgment on the part of the Bhotiyas of their subjection to the parent state. Before the establishment of a strong government in Kumaon and Garhwál, the authority thus exercised by the Tibetan Government was by no means only nominal. The former Hindu Governments in these districts were, with few exceptions, weak and unstable, consequently the Bhotiyas were the less inclined to resist the orders and the demands of the Tibetan authorities, and the taxes paid by them to the foreign Government were formally recognised by their Hindu rulers in both districts. Since the British conquest of these districts no notice of the matter has been taken by the British Government, but the Bhotiyas have gradually become more and more independent of Tibet, and more obedient to their European rulers, attaching themselves, as might have been expected, to the stronger side. There can be no doubt, too, that the Huniyas are quite aware of the inexpediency of any active interference in the concerns of British subjects.

¹ Gaz. XL, 567.

The dues collected by the Tibetan officials as revenue, according to Traill, consist of "*Sinh thal*," land revenue; "*Yu thal*," tax on sunshine; "*Klén thal*," tax on the profits of trade. These items are all levied at fixed and invariable rates. The "*Sinh thal*" is assessed at twelve "*polas*," of *gúr* per *konch*, on the lands assessed to revenue, but as a great portion of each village is held revenue-free on former grants, the aggregate payments under this head are very trifling. The "*Ya thal*," which from its name, has probably originated in the migratory habits of the Tatars, who, during the winter, remove to the warmest situations, is assessed at one cake of "*balma*" or dried yeast per house. The above dues are collected by Tibetan officers, who visit the passes with that view: the whole is received in kind, though the *gúr* and yeast are partly commuted for sugar, grain, spirits, and coarse calicoes. The *Klén thal* is levied in the shape of transit duties, and "*Klén kal*" at the rate of ten per cent. on grain. These are also collected in kind, at the first mart visited by the Bhotiyas, the loads of every tenth sheep, together with the wool on its back, are there taken, unless commuted by the payment of twenty-seven "*polas*" of *gúr* per sheep. Duties are also levied on some few articles, agreeably to the rates fixed by an ancient tariff; commodities not included in that schedule pass free. Broad-cloth and many articles, the exportation of which from hence commenced at a comparatively recent date, fall under the last description. In some cases individuals are subjected to a tax called "*Auro*," or plunder, substituted for the "*Klén kal*," or transit duties, and levied at nearly the same rates. This, from its name, should be a species of police tax, an insurance against robbery. The inhabitants of the northern village at the head of each pass enjoy certain immunities from these duties, and are, moreover, authorized by the trans-Himálayan government to levy a transit duty of ten per cent. on the salt or borax of the Tibetan traders visiting the pass. This duty, as well as the "*Klén kal*," paid by the Bhotiyas, is levied only on the first investment of each trader during the season.

In matters of police, the Bhotiyas are held responsible for the communication to the neighbouring authorities of all important transactions which may occur in their villages. The local tribunals

take cognizance of all cases brought before them by the Bhotiyas, whether originating in Hundes or elsewhere. In civil proceedings, the decrees of the court written in the Tibetan character and language, and sealed by the presiding officers, are delivered to the successful parties. A confirmation of these documents where they affect general interests, as also of grants exempting lands from public assessment, are obtained by the parties concerned from succeeding governors. It does not appear that this Government ever originates any inquiry into crimes or offences committed by the Bhotiyas elsewhere than in Hundes ; nor does it delegate any power, judicial or fiscal, to the Bhotiya village functionaries. Such are the marks of subjection which the mother country continues to demand from the Bhotiyas. Those exacted by their Hindu conquerors have ever been more costly and more extensive. The Bhotiyas continue to pay their taxes according to the old custom, but they do so in a great measure because the dues are not sufficiently onerous to be worth quarrelling about and the supremacy of the Tibetan government is now almost entirely nominal. I do not speak of the duties levied on trade, which stand on an entirely different footing ¹

It has, however, always been the policy of the Bhotiyas to profess to all Europeans, and indeed, to, people
 Trade jealousy. generally with whom they may have dealings, the greatest dread of the Tibetan authorities, and to declare the constant fear they are under of having their trade stopped on which their whole means of subsistence depends, should the slightest infringement of the regulations and orders of the Tibetan Government take place. It has generally been taken for granted that these statements were perfectly true, and until a short time ago it seems never to have been suspected that the fear of losing their monopoly had much to do with these representations. It was with the greatest difficulty that a European traveller could obtain even the slightest glimpse of Tibet, and even our Kumaon officials were troubled with the fear of ruining the people who showed them the way into the forbidden country, a feeling which proved a stronger defence against ' the foreign devils ' than the jealousy of the Chinese government. The utter mistake of such ideas is shown sufficiently

¹Cal. Rev. I. c.

by the experience of several Europeans who, the Bhotiyas knew, could not be trifled with. These have marched into Hundes not only without concealment, but with large camps accompanied by the heads of the Bhotiya villages who supplied all the carriage and supplies, and in defiance of the orders of the Tibetan authorities given by them in person. The real fact is that Hundes is so utterly dependent on India for its supplies that the authorities there will never, without the most absolute necessity, do anything which might endanger the trade on which their subsistence depends, and they are perfectly aware of the immense power over them which this fact gives to our government and the people of our districts. If the passes were ever closed by us for a single season there would be a famine in Tibet.¹

In 1815 Dr. Rutherford, who had charge of the Company's investment in Moradabad, proposed his deputation² to Tibet with a view to open up the trade between the Company and the natives of that country. Hitherto very little had been known regarding the consumption of European products and manufactured articles within the hills. It was believed that the hill people purchased the woollen cloths and cottons of English manufacture for their own consumption, and acting on this view, every effort was made to extend the trade. It was advised that the more prudent course would be to endeavour to open a trade by seeking a convenient mart in the first place at Almora and making use of the Bhotiyas as carriers only. Further inquiry showed that the wares purchased by the Almora merchants at Káshipur were bartered to the Bhotiya carriers who disposed of them at Gartok and other places in Chinese Tibet. Thus four sets of profits were made before the goods reached the actual consumers. This so enhanced the price that, coupled with the badness of the roads and the restrictions placed on the trade by vexatious taxation and the oppression of the rulers and their officers through whose dominions the consignments passed, in 1815, it had become very inconsiderable, and when further and more accurate information became available, it was resolved that no further steps should be taken to open up direct intercourse.

¹ Cal. Rev. 4, c. 6th June, 1815.

² To Government, 25th May, 1815. To Commissioner,

It has been already mentioned that the principal occupation of the Bhotiyas is the carrying trade into Tibet.

Bhotiya trade.

Of this they possess almost a complete monopoly which they jealously guard by every means in their power. The poverty and the want of enterprise of the merchants of Kumaon and Garhwál, the difficulties to be overcome in crossing the passes without the assistance of the Bhotiyas, the total absence of tolerable roads, and perhaps more than all the force of immemorial custom, have hitherto prevented any serious attempts towards the abolition of the Bhotiya monopoly. Under the present system no considerable increase of trade can be looked for, for the means of the Bhotiyas are quite insufficient for carrying on a much more extensive trade than the present. But it may be doubted whether if the monopoly of the Bhotiyas were abolished and the jealousy of the Tibetan authorities towards every innovation were to cease the trade could receive any very great increase, and it seems probable that under the most perfect freedom of intercourse it must remain insignificant. The greater part of the country immediately to the north of the Himálaya is almost uninhabited, and the small population which exists is generally in a state of such abject poverty that any great additional consumption of either the necessities or the luxuries of life seems almost impossible, and nothing but a great demand in the Tibetan districts adjoining India can possibly lead to any considerable increase of trade between the two countries. The agricultural productions of Hundes being utterly insufficient for the support of its inhabitants, the country almost entirely depends for its supplies on India. Grain being the greatest necessary to the Huniyas forms the chief article of export from our districts. The greater portion of this demand is met from the surplus produce of the upper Pattis that lie to the south of the snowy range. The exports next in importance are coarse cotton cloths, broad-cloth, sugar and its preparation known as *gúr*, &c., hardware, tobacco, spices, rupees, corals, and beads. The principal imports are borax, salt, gold-dust, and wool. Borax was formerly a much more profitable investment than it now is. The great European demand for this mineral was formerly in a great measure met by the Tibetan trade, but the discovery of the *lagoni* of Tuscany, and the immense development which European and American science has given to

the manufacture of borax from boracic acid has greatly curtailed the demand, but still the borax trade exists and is sufficiently considerable to render it of prime importance to the Bhotiyas. In a former volume some account has been given of the country in which the borax is found.¹ Very little borax is consumed in these districts, so that the whole of the imports are carried to Najibabad or disposed of at Rámnagar, and there prepared for export to Farukhabad, Calcutta, and Europe.

The salt is for the most part exchanged for grain in the upper pattis, but here, too, it has to bear the competition with the duty-paid Sámbar salt, and the conflict is simply settled by the distance and the advantages accruing from a system of barter where coin is scarce. This branch of the trade between the Bhotiyas and the people of the lower hills is remarkable for the uniformity and unchangeableness of the system on which it is carried on. The total absence of roads and bridges and of economical means of transport renders it very difficult to engage with advantage in any mercantile speculation in these districts. None of the parties engaged in this trade can venture to leave the beaten track in hope of greater profits, so that it is quite possible to choose from time to time the best market according to the variation of prices in different parts of the country, and all must be contented as much from the comparatively smallness of their individual transactions as from any other cause, to dispose of their commodities to their neighbours and customers according to whatever may be the established custom of the place. It is not until towards the end of June that the snow melts sufficiently to enable the Bhotiyas to cross the passes into Hundes. During this and the preceding month the grain is carried from the lower hills to the Bhotiya villages. A large quantity is also delivered there in these and the succeeding months by the inhabitants of the upper pattis; the whole being carried on sheep and goats precisely in the manner that is followed by the Bhotiyas. These

¹ Gaz. X., 293. Both the borax and the salt are procured in the same way by working the earth taken from the ground in which they occur by lixiviation. These salt fields are open to all who choose to adventure their labour in them on the payment of a tenth of the produce to the State representative, who has an excise establishment on the spot for its collection.

carriers barter their grain for salt at the villages not being allowed to enter Hundes. From June until October the grain is carried across the passes, and borax and salt comes back, the principal men remaining in Hundes to superintend operations, whilst the women and children remain at home and look after the fields. In the Juhar valley there are three depôts for the convenience of trade; one in the Bhot valley whence they bring all their goods to Munshiyári before they carry any futher down, and which forms the second depôt. On leaving Munshiyári they generally form depôts at Tejambugr, Sera, Gangoli, or other places where their families reside during the winter. Many erect temporary shelters; and while the women are occupied in weaving blankets and tending the ewes and cattle, the men carry the borax to Bágeswar and Rámnagar, or barter the salt in the villages. Old and infirm persons occasionally prefer passing a winter of imprisonment in the Bhotiya valleys rather than endure the fatigue of the journey down: in these cases a sufficient stock of provisions is left with them, whilst the water is furnished in abundance by the snows in which they are buried. The Bhotiyas of the Garhwál passes purchase their grain as low down as Dhanpur and Lohba. The grain purchased at a distance is in the first place transported to Joshimath or thereabouts and stored: that purchased near their winter encamping grounds is first brought home and then that more distant, so that all arrives about the end of July when they cross the passes. Of late years the Bhotiyas have been accustomed to contract with Nágpur and Dasoli men to bring up their surplus stores of grain paying in salt and wool, which form a load for the return journey with the result that the number of these intermediate carriers is increasing; other men perform a similar duty in Kumaon. The Bhotiyas of Byans and Dárma dispose of their borax at Dhárchula, Champáwat, and Barmdeo and the Juháris at Bágeswar and Rámnagar. The Garhwál Bhotiyas usually sell at Nandprayág but many also proceed to Rámnagar, which is the great centre of the refining operations. The Byáns Bhotiyas trade with Taklakhar: the Dármias and Junáris with Tara, Misar, Gyanima (or Gyanip), and Gártoh: the Niti people with Daba and Shib Chilam, and the Mana people with Toling. By the Nilang pass the trade is carried on by

Basáhiri Khampas and Jádhs of the Nilang valley with Tsaparang or Chaprang.

The village in each Bhotiya district nearest to the pass and, which is also usually the most considerable
 Opening of trade, in the valley enjoys various privileges and immunities from taxation, in return for which assistance is expected by the Tibetan authorities in carrying out their regulations regarding the Huniya merchants who may cross the passes to the Bhotiya villages. The opening of the commercial season is carried out with some ceremony. The first step is taken every year when the passes into Garhwál become practicable in the beginning of June by the Tibetan authorities. An agent is sent to each of the Bhotiya valleys from the officer charged with the superintendence of commercial affairs. It is the business of this agent, who is known by different names in the different districts, to inquire into the state of affairs in India and to make his report to his own superiors. Politics appear to be matters of much less importance than the state of the public health, and the presence of small-pox or other contagious diseases in the Bhotiya valleys alone causes a temporary interruption of intercourse. If the report of the Tibetan envoy be satisfactory, the trade immediately commences by the deputation of representatives of the Bhotiyas with offerings and tributes. Each village has a distinct kind of offering, thus Níti being nearest the pass has only a nominal one, whilst another has to furnish the green tops of certain fir trees used by the Huniyas at festivals; Juháris pay one cake of coarse sugar for every twelve families, and a piece of coarse cloth equal in length to the breadth of every piece they export. The people of Dárma and Byáns pay a tenth of all grain taken in barter, whilst those residing not so close to the frontier pay two *timdshas* each. In Kumaon, the agent is accompanied by a single follower, and bears with him certain presents, and makes his report to the Huniyas. This is taken down in writing and transmitted to Gartoh, and if approved of the passes are declared open. The Bhotiyas then return with a present in gold-dust equivalent to the value of the things brought by them accompanied by a Huniya official, on whose verification of the statements made by the Bhotiyas the opening of the passes depends.

With the exception of Jubár,¹ the inhabitants of which are privileged to choose their own markets, the trade of each of the Bhotiya valleys is confined to some particular mart in Hundes, and most minute regulations are laid down in each case for the management and control of the traders. It seems wonderful that under the strange system of monopoly and restriction that exists, the trade should ever have reached even its present importance. Neither the Tibetans nor the Bhotiyas seem to distrust the wisdom of the existing regulations, and any infringement of them is viewed with great jealousy, though, perhaps, with different motives on both sides. One of the most curious parts of the whole system is that by which the dealings of each individual trader are controlled.

Traill writes :—"The commercial operations of the season usually commence by the arrival of the Huniya traders in Bhot, as the superior strength and hardihood of their sheep enable them to cross the snow earlier than the Bhotiyas; from this period (about the end of July) till the middle of October the flocks of both parties are employed in plying with loads between the pass villages and the marts." The Mána Bhotiyas, however, usually trade for cash, and those of Kumaun barter their Tibetan products for goods for the export trade. The Huniya traders do not usually visit any villages below the passes, but in Garhwál they come in large numbers to Nítl, and a few find their way down to Hardwár and Rámnagar. On the Dárma side they visit Barmdeo. The landholders of the northern parganahs who transport their own produce into Bhot are deterred from proceeding into Hundes, and even in Bhot they are precluded from dealing directly with others than the Bhotiyas. The men of Dasoli in Garhwál sometimes visit Daba, and a few Nágpuris find their way to Chaprang, but the Bhotiyas are still the middlemen in all Garhwál.

"A few of the Almora merchants occasionally visit the nearest marts in Hundes, more particularly Taktlakhar, at the head of the Byáns pass; but their ignorance of the Tibetan language, and their want of the means of carriage, render them dependent to a great degree on the Bhotiyas, and prevent them from trading in those articles of bulk, such as grain, *gúr*, &c., which afford the most certain and profitable returns. The Bhotiyas consequently enjoy to a great extent a monopoly of the carrying trade from Hindustan to Tibet in the supply of the local demands in Hundes, and the system in force there operates to confirm a complete monopoly. The regulations which restrict the trade of each pass to a prescribed mart affects the inhabitants of the latter equally with the Bhotiyas; this system is farther extended even to individual dealings, and every trader has his privileged correspondent, with whom he alone has the right to barter. These individual monopolies, if they may be so called, are considered as hereditary and disposable property, and where the correspondent

¹ The Jubáris have the further privilege that their headman is furnished with two ponies and all necessary supplies at each camping place free of cost whenever business brings him to Tibet.

becomes bankrupt, the trader is under the necessity of purchasing the right of dealing with some other individual. From successive partitions of family property, and from partial transfers, this right of *drath* has been gradually subdivided, and many Bhotiyas collectively possess a single correspondent. This system differs so from that of the Hong merchants in China, that it leaves to every Huniya the power of trafficking directly with the foreign trader, though it restricts his dealings to particular individuals; the only persons who appear to be exempt from its operations in Hundes are the local officers, civil and military, and the Lamas. On the dealings of foreign merchants with each other it has no effect. Besides the Bhotiyas, pilgrims occasionally cross the passes to visit Kailás and the Mánasarowar lake."

This quotation, however, does not in one point state the facts quite correctly, for it implies that each Tibetan trade custom. Bhotiya can only have a single correspondent. New *draths* can be established, but not to the prejudice of the old ones. It is always arranged what amount of commercial transactions shall be carried on; and if one of the parties wishes to extend his dealings no objection is made to his doing so and to establishing new *draths* with other persons, an equally stringent agreement being necessary in every case. The Bhotiyas alone possess the privilege of selling or transferring their correspondents, the Huniyas having no such power of disposing of their Bhotiya correspondents. Suits arising out of this strange custom are sometimes brought before our civil courts. In a recent case one Bhotiya sued another for the exclusive right to trade with a particular Huniya. Neither party ever referred in the slightest degree to the wishes of the Huniya who was thus to be disposed of, and it was evident that his acquiescence in any decision arrived at was regarded as certain. The officer who tried the case met the very man shortly afterwards, who humbly expressed a hope that he should not be transferred to the person who instituted the suit. Strange as such cases must appear, it is necessary that our courts should listen to them, for neither Huniyas nor Bhotiyas seem to doubt the excellence of their system, and the only result of refusal would be to drive them into the courts of the Zangpuns of Hundes. The principal part of the trade between the Bhotiyas and the Huniyas is carried on by barter, and almost every article is furnished by the Huniyas agreeably to an assize held at a remote period. The Bhotiyas of Juhár boast that they are the descendants of the traders who procured the fixation of prices by the govern-

ment of Lhása. As a necessary consequence of the limitation regarding persons with whom the Bhotiyas may trade, there is a limitation also as to places, and each valley has its own mart.

The rate of exchange usually obtaining in Hundes is eight *pdthas* of unhusked rice for twenty of salt or seven of cleaned rice for the twenty of salt. Some account of the weights and measures in use will be found under this head in the notice of KUMAON. We shall now proceed to give the trade statistics which were first recorded in 1876-77 by establishing posts at Pandukeswar for the Mána pass, Tapuban for the Níti pass, Milam for the Juhár pass, and Dharchula for Dárma and Byáns. In 1878-79 a post was established to control the Nilang pass in Tíhri. The gross value of the traffic for the last six years, excluding that by the Nilang pass, has been as follows :—

<i>Exports.</i>			<i>Imports.</i>		
		<i>Rs.</i>			<i>Rs.</i>
1877-78	...	94,924	3,09,507	1880-81	...
1878-79	...	1,13,016	2,38,073	1881-82	...
1879-80	...	1,64,880	3,26,259	1882-83	...
					<i>Rs.</i>
					1,45,882
					3,84,170
					1,88,660
					3,92,301
					1,94,303
					3,43,932

Exports.—The cotton cloth exported is chiefly of the coarser Indian and European manufacture. The export of piece-goods is chiefly through Juhár and the same parcels contain small amounts of European broad-cloth, pearls, and coral beads. The following shows the weight in maunds of 82lb. each, and value of cotton and woollen cloths and miscellaneous articles exported :—

<i>Weight.</i>			<i>Value.</i>		
		<i>Mds.</i>			<i>Rs.</i>
1877-78	...	305	12,674	1880-81	...
1878-79	...	269	18,455	1881-82	...
1879-80	...	417	19,409	1882-83	...
					<i>Mds.</i>
					436
					23,889
					462
					24,823
					495
					28,750

The export of European cloth was only 25 maunds in 1876-77, 199 maunds in 1878-79, 25 maunds in 1879-80, and 30 maunds in 1882-83. Traill estimated the value of the exports of cotton stuffs up to 1821 at Rs. 10,000 a year. In 1840 the exports by Juhár and Dárma were valued at Rs. 14,000. The export of grain is principally through the Kumaon passes and consists chiefly of the cheaper mixed spring crops—wheat and a little rice. In 1876-77 the recorded

Grain.

export was 28,000 maunds, and for succeeding years the figures are :—

	Weight.	Value.		Weight.	Value.
	Mds.	Rs.		Mds.	Rs.
1877-78 ...	28,166	49,151	1880-81 ...	43,339	97,334
1878-79 ...	34,645	74,276	1881-82 ...	48,796	1,18,584
1879-80 ...	39,289	1,16,919	1882-83 ...	63,416	1,35,870

Up to 1822, Traill estimated the average annual export at 20,000 maunds. In 1840, Batten estimated the exports by Juhár at 9,000 maunds and by Dárma at 12,000 maunds. The returns of the last year are noticeable for the large increase in the export of grain, which was accompanied by a decrease in the imports of borax and increase in the imports of salt. The total trade with Tibet is only seven per cent. of the foreign trade of the North-Western Provinces with Tibet and Nepal. In Hundes the Bhotiyas obtain two parts of borax or salt for one part of fine grain and one and a half to one and a quarter parts for one of coarse grain. Oil and oil-seeds are also exported, the former chiefly through Juhár and the latter by Nilang.

The export of sugar, chiefly unrefined, forms a great portion of the traffic by the Dárma and Byáns passes.

Sugar, &c.

For all, the figures were in 1876-77, 5,560 maunds, and for succeeding years as follows :—

	Weight.	Value.		Weight.	Value.
	Mds.	Rs.		Mds.	Rs.
1877-78 ...	7,661	23,068	1880-81 ...	8,437	19,318
1878-79 ...	1,868	13,067	1881-82 ...	8,559	42,410
1879-80 ...	5,178	23,437	1882-83 ...	3,914	23,964

Traill estimated the export of *gúr* up to 1822 at 1,000 maunds a year and of refined sugar at 100 maunds. In 1840 the exports by Juhár and Dárma were estimated at 12,000 *belis* of *gúr* and 90 maunds of refined sugar. During the same year the export of dates, almonds, cloves, red-pepper, nutmegs, cardamoms, and camphor by Juhár amounted to 108 maunds, valued at Rs. 8,600: miscellaneous commodities, such as penknives, buttons, crockery, and the like, 900 maunds, valued at Rs. 12,000: indigo 5 maunds, valued at Rs. 500: pewter and sal-ammoniac 2 maunds, valued at Rs. 150: broad-cloth valued at Rs. 17,000: moleskin and other European cloths, valued at Rs. 4,000: *kharuwa* cloth, country

made, valued at Rs. 3,000 : pearls and coral beads at Rs. 2,300 : tobacco 200 maunds, valued at Rs. 2,000 and betel-nut 5 maunds, valued at Rs. 200. In Dārma 150 maunds of tobacco were exported valued at Rs. 1,500. Wooden vessels, chiefly cups for tea, are also in considerable demand in Tibet. These are made from the knots of the *Acer caudatum*, called *kon-shin* by the Bhotiyas of Byāns, and the cups are known as *lahauri-dola*, whilst a better class made from the knots of the *Acer oblongum* (called *patangliya* or *kirmoli* on the Gāgar range) are known as *taluwa-doba*. A small quantity of tea has been exported from time to time, but as this consists of only the inferior kinds, the Huniyas prefer their own supply from China. Fashions in the matter of broad-cloth vary in Tibet as much as in Europe : one year a snuff colour is in favour, next year a brown, and again an olive coloured cloth; and losses often arise from a certain colour ceasing to be in demand.

Imports—Very little borax comes by Nilang and Māna. The imports by all passes in 1876-77¹ were 16,051 maunds, the statistics for succeeding years, excluding Nilang, being as follows :—

	Weight.	Value.			Weight.	Value.
	Mds.	Rs.			Mds.	Rs.
1877-78 ...	22,694	71,433	1880-81 ...		20,536	1,70,730
1878-79 ...	16,544	52,799	1881-82 ...		33,821	3,02,926
1879-80 ...	18,948	94,616	1882-83 ...		21,627	1,72,216

The borax and salt mines called *tsa-tsāka* lie to the north of Bongbwa-Tol across a range which bounds the valley of the Shajjan river to the north-east. The exchange value at Gartoh is about Rs. 2 per cwt. or Rs. 1½ per maund. During the six years¹ preceding 1821, the price of borax at Bāgeswar and Almora averaged Rs. 8-8-0 per maund of 82 lb. The price has had great fluctuations. Up to the British occupation the imports of borax rarely exceeded 1,500 maunds and the price for the raw article Rs. 3-8-0 a maund, but owing to the competition of English merchants, who made large advances for the purchase of the mineral in 1815-16, the price went up to Rs. 14 a maund, and the imports increased to 20,000 maunds in the following year. This was excessive compared with the demand ; heavy losses ensued and

¹ To Board, 25th April, 1821. See Gaz X. 293 : for an account of borax refining, see 'Report on Foreign Trade' for 1876-77.

capital was withdrawn from the speculation. In 1819-20 the price ranged between Rs. 12 and Rs. 14 per maund and fell to Rs. 6 in 1820-21, rising in 1821-22 to Rs. 8, and again falling to its normal price at Bageswar, between Rs. 5 and 6 per maund for the unrefined article. In 1872, the price rose to Rs. 12, falling in 1877-78 to Rs. 3½ and rising again the following year to Rs. 5½. In 1840 the imports by the Juhár pass were estimated at 9,000 maunds, and by the Dárma passes at 8,000 maunds. In 1868-69 about 17,000 maunds came by Milam; 15,000 by Dárma and Byáns; and 15,000 by the Garhwál passes. In the following year the total imports were 31,473 maunds.

The statistics of salt show 28,631 maunds in 1876-77, but as it is not sold for coin but bartered for grain the value is an estimate:—

			Value.				Value.
			Rs.				Rs.
	Mds.				Mds.		
1877-78	...	31,709	1,09,072	1880-81	...	37,531	1,56,790
1878-79	...	21,463	81,784	1881-82	..	27,717	1,10,868
1879-80	...	39,786	1,81,681	1882-83	...	34,946	1,39,784

The Tibetan salt is dearer than that of the plains at Almora, but the further northwards we proceed the conditions alter and the cheaper salt wins the day. In 1821, the value at Almora for the previous six years averaged for Tibetan salt six rupees per maund and for Plains salt, three to four rupees. The barter as carried on at the same time is thus mentioned by Traill.¹ "The trade between the Bhotiyas and Tibetans proceeds wholly by the mode of barter, the commonest kind of grain, such as *phápar*, *manduwa*, and *ua jau* are exchanged at the villages within the Himálaya for an equal measure of borax or a double one of salt, while rice or wheat procure in the same situation a double measure of the former and a triple or quadruple measure of the latter article. This is the result when the Huniya is carrier in both instances, coming and returning; but when the Bhotiya proceed with his investment directly to the marts in Hundes a proportionately greater return (double) is necessarily obtained." By the time the salt reaches the consumers in our hills it is worth four or five times its weight in grain. Taking cash values the salt costs the Bhotiya in

¹ To Board, 25th April, 1881.

Hundes about Rs. 1-4-0 per maund, and he receives value to Rs. 5-0-4 per maund at Bágéswar. The average import up to 1822 by all the passes was about 15,000 maunds. In 1841, the imports by Juhár amounted to 2,000 maunds and by Dárma to 3,000 maunds (valued at four rupees a maund). In 1868-69 9,000 maunds came in by all the passes¹ and in 1869-70, 10,521 maunds.²

Wool and woollen blankets locally manufactured form the next important item : 245 maunds of raw wool and 880 maunds of woollen stuffs were imported in 1876-77. The figures for succeeding years are as follows :—

	Raw manufactured.		Value. Rs.		Raw manufactured.		Value. Rs.
1877-78 ...	6,225	1,072	1,09,845	1880-81 ..	2,935	59,936	
1878-79 ...	2,049	255	54,143	1881-82 ...	2,912	77,081	
1879-80 ...	2,373	311	51,275	1882-83 ...	2,266	49,363	

Blankets and coarse serges are the only articles manufactured to any extent by the Bhotiyas, and these chiefly for home consumption. The species called *pankhi*, which has the wool combed up on one side to resemble a fleece and which is made into gowns called *chaugas* and *bukus* or *bukhas* is manufactured by the Bhotiyas themselves. The thick woollen blankets are called *tholmas* and *chaptas*. Some account of the wool trade has already been given,³ and we here merely complete the statistics. The remaining articles of import comprise gold-dust bound up in packets called *pha-tangs*, tails of the Yak for chauris, drugs, zafrán, and leather, valued at an average of Rs. 20,000 a year from 1815 to 1822. In 1810 gold-dust valued at Rs. 12,000 was imported; chauris, aconite, orpiment, shawls, silks, tea, saffron, and musk, valued at Rs. 7,400; pashm valued at Rs. 1,150; coarse woollens valued at Rs. 3,000, and specie chiefly *timáshas* and rupees worth Rs. 22,000 were imported by the Juhár and Dárma passes. Ponies, damaged shawls, and coarse silks used to be imported to serve for payment in kind when such was the practice and were received at arbitrary prices far exceeding their value, but on the abolition of the duties on trade

¹ By Juhár, 4,000; Dárma, 3,000, Garhwál, 2,000.
2,000; Dárma, 4,000; Garhwál, 1,521.

² By Juhár,
³ Gaz. XI, 51

their import (except ponies) ceased. There can be no doubt that the opening of the railway to Ránibág at the foot of the hills will cause considerable changes in the course of trade, and the articles it comprises. Salt will probably be of less importance to the Bhotiya, and we may look for some improvement in the trade in borax and raw wool.

Notwithstanding the pooriness of the Tibetan country, indications are not wanting that the monopoly of the Bhotiyas will be broken, and that the result will be an increase in the aggregate amount of trade with Tibet. Under the former governments, the Juhári Bhotiyas alone had power to trade in plains merchandises all the others being confined to dealings in grain, and we know how long it takes in this country to break a custom when once established though no penalty attaches to any breach of it. Under the Gorkháli government for the first time the men of Nágpur and Dasoli in the west and those of the lower parganahs in the east turned their attention to the Tibetan trade. Of late years, again, the balance has appeared to incline in favor of the Juháris from their comparative nearness to the great marts for hill produce. In former times, owing to the exactions to which all plains commodities were subject, and the necessity for purchasing through many middlemen, they bore an unduly enhanced value in Hundes. But since 1815, owing to the facilities afforded by good roads, the abolition of transit dues, the presence of a good police, and the establishment of marts at the foot of the hills where the Bhotiyas can go and purchase for themselves whatever they require for their return investment the cost has for them diminished fully one-half. In this the Huniyas do not participate. The following remarks of Traill and Batten apply at the present day :—

" Were more equitable principles to be introduced in the transactions of this commerce, and were the commodities of India and Europe offered on fairer terms in the Huniya market, it is difficult to say to what extent the demand might be augmented. While the Bhotiyas retain their existing monopoly, no such desirable modifications can be anticipated as a continuance of the present exorbitant rates of profit is almost indispensable to avert general bankruptcy, which must otherwise result from the heavy load of debts with which the Bhotiyas are universally saddled. From the establishment of a direct intercourse between the Almora merchants and those of Tibet the desired object

will doubtless be gradually gained, the same capital will continue vested in the trade, but the whole profit of the speculation will there fall to the capital itself, while the losses to which the latter are now constantly subjected from the failure of the intermediate trader will be prevented; under such circumstances the rates of profit would naturally be lowered, and the demand and supply of exports from India might be expected to increase. To the Bhotiys, the disadvantages resulting from such a change would be more apparent than real. In the trade of the most profitable article of barter, grain, little or no competition could be offered, and with regard to the rest their services would be still indispensable in their proper original character of carriers and road-makers. Such an event in reference to their monopolising spirit, and inhospitable attempts to keep up and increase all the existing barriers against international intercourse would not be much regretted beyond their own circle."

Colonel Garstin writes, as regards Garhwál that "there are, however, signs of this monopoly being broken through; in 1872 some Nágpur men in Garhwál attempted to deal direct with the Huniys of the Garhwál passes. A law-suit was the result, but it shows that others are prepared to attempt competition with the Bhotiys. The Juhári Bhotiya is a much wealthier and more speculative man than his Garhwál neighbour. The latter is almost always in debt and entirely dependent on his creditors who, trusting to his proverbial carelessness in money matters, unite to leave him the barest means of support. They are now, however, improving by experience, and if they can once relieve themselves from the load of debt, there is a good opening for trade with Kot-dwára which is in direct communication with Níti by a good road at once shorter and better situated for grazing for their animals than the Rámnagar route. There is a demand for cloth in Hundes, but the Bhotiys are too poor to trade in it for themselves and merely carry it on account of their creditors or other rich traders.

The following account of the existing practice is given by Mr. Fuller in his report for 1878-79 :—

"As an indication of the manner in which trade is transacted, an example of the year's business of a Juhári Bhotiya may be given. Starting from Milam in April or May, with his sheep laden with Indian produce, he journeys to Gartok, the chief mart in Tibet. There he meets Tibetan traders in borax, salt, or perhaps gold-dust, who have brought these goods from places some distance beyond. Exchanging his grain, sugar, or cloth, for these articles, he returns to Milam, and, as the colder months of autumn approach, shifts his residence to places in the lower valleys this side of Milam, of which Tejam and Munshiýári are the chief. From thence he journeys southwards during the winter months in time to arrive at the fair

Trade at present.

held in the Bágewar valley (28 miles north of Almora) in the month of January. There he meets traders from the lower hills or plains beyond them, with whom he barter his Tibetan goods for the grain, sugar, and cloth, which are to form his next venture. If his goods do not sell at Bágewar, he marches on to the larger markets of Pilibhit or Rámnagar, at the foot of the Hímálays. Occasionally more enterprising Bhotiyas reach Dehli, Agra, and even Cawnpore, returning, however, so soon as the hot weather begins to set in. Although three or four men have obtained considerable wealth, the majority appear to be on the verge of destitution, and trade not so much "for their own hand" as under the direction and with the capital of their wealthier brethren or of Baniyas in Bágewar, Almora, or Barmdeo. To give some idea of the condition of most of these traders and of the manner in which they are tied, hand and foot, by pecuniary obligations, it may be mentioned that; some years ago an English agent of a Calcutta house, who went to purchase borax at the Bágewar fair to the value of a lakh of rupes was unable to obtain a single pound though the fair was flooded with it, and it was selling at no higher prices than he offered. The two or three wealthier traders, considering that the competition of outsiders threatened their interests, combined against him, and prevented the lesser ones from calling. A state of things like this would seem to go far to prevent any expansion of the trade controlled as it is by a small combination of traders who prefer attempting to stimulate prices by limiting the supply to increasing their profits by extending their transactions. Although most of the trade appears to be transacted in the manner described above, yet a certain portion of the Tibetan goods which enter our territory is brought to Milam by Tibetan traders themselves and exchanged there with the Bhotiyas. This is said to be especially the case with gold-dust. As with the Bhotiyas sheep are the means of conveyance for these Tibet traders between Milam and their own marts, but the sheep differ greatly from those used by the Bhotiyas especially in the far finer quality of their wool. It is reported that Tibet sheep rarely come south of Milam. One class of Tibetans cross our boundary in large numbers (said to be yearly increasing) and frequent the Bágewar and other fairs. The goods they bring are, however, for the most part of little importance, chiefly consisting of peltry and turquoises. Tibetans coming to Milam with their goods give the Bhotiyas a commission of 10 per cent. on sales. This exaction is not recognized by the authorities, but is founded on long established custom and cannot be prevented. As has been noticed before, most of the trading is done by barter. Horses and *pashmíns* (of goat's wool) are said to be usually paid for in cash, and it seems that certain articles are considered especially exchangeable for one another. On this principle, gold-dust is said to be chiefly given in exchange for cotton cloth, the most valuable of the regular exports. British coin is readily received in Tibet in preference, if anything, to local coin. A small silver coin is current called a *simdala*. Chinese coins are also occasionally used, being in the primitive form of bars of silver stamped in evidence of quality. One coin, called *kura*, is equal in value to Rs. 100, and is used in large transactions."

A brief notice of the animals employed in the trade will close this portion of our subject. Sheep and goats serve as the means

of transport for nearly the whole of the grain, salt, and borax and generally of all articles that are not very bulky, and some description of them has already been given.¹ The Bhotiyas keep few ewes themselves. They buy as many sheep as they want from the Chamba valley brought here by Kángra men as well as from the people of Dánpur. Sheep carry from five to eight sers and goats from eight to ten sers of 80 *tolas* each, but the former are more common, and six of them on an average carry a maund of 82½. They march from five to six miles a day and make about five trips across the passes each year so that it would take a flock of 30,000 sheep to transport 25,000 maunds. For bulky articles the *jubu*,² a cross breed between the yak of Tibet and the Indian cow is used; being better able to bear the changes of climate to which the trade exposes them, they are preferred to the pure breed of the yak.³ Some, however, of the Bhotiyas keep the last-named species also as well as flocks of the large Tibetan sheep. These are never brought down into the lower hills when it can be avoided, and are only employed in the transport of goods across the passes and through Hundes. They are sometimes left in Hundes for the winter in charge of the Huniya friends of the Bhotiyas. The statement that the hybrids breed freely together must be corrected, for from inquiries made, it is clear that the male *jubu* and *garjo* are absolutely sterile; but that the female can breed with a male of either of the pure races, in which case the produce nearly approaches the character of the sire. Formerly there was a considerable trade in the hardy ponies known as *gúnts*, but since the Sikh invasion in 1840, when most of the mares were taken away, it has languished, and ponies which could previously be procured in numbers for one hundred rupees each now fetch three times that price and are scarce.

When the Bhotiya maháls became subject to the hill states the assessment was fixed at a quit-rent payable in gold-dust. A knowledge of this circumstance at once explains the nature of the denominations in which the revenues of these tracts were calculated, the *lanch* or *tola*, *mdsha*

¹ Gaz. XI, 38² *Ibid.*, p. 38 more correctly *shobu* or *so*.³ Commonly called in these hills *chaunr*, the 'ri' being nasal.

and *rati*. The detailed cess fixed under this system became the standard of estimate up to Batten's settlement, and was equivalent to the modes of measurement in use elsewhere. In practice the value of the *kanch* varied considerably and was subsequently fixed at twelve rupees.¹ In Níti the measurement² was similarly fixed on a standard called *dumaula* equal to half a *kanch* or six rupees. The assessable items comprised besides the ordinary agricultural products, the profits on trade equivalent to our license-tax, a loom tax called *tandkar* which also has its type in the plains systems, jungle products, pods of the musk deer, hawks, bees' wax, and honey. In the old records of the Garhwál and Kumaon assessments before the British occupation all these items are enumerated and assessed separately. The aggregate revenue thus imposed on each valley was as follows :—

		<i>Kanch</i>	<i>Masha</i>	<i>Rati</i>	
Juhár	...	123	5	2	Níti or parganah Painkhanda 306
Dárma	...	369	1	5	<i>dumaula</i> = 103 <i>kanch</i> .
Byáas	...	71	9	0	

Mána appears to have been from the first granted in *saddbart* to the Badrináth temple therein situate. The revenue due from Byáas is given as it stood whilst belonging to Jumla and omitting the few villages east of the Káli still belonging to Nepál. The Bhotiyas were subject to the reliefs and aids levied from all subjects on occasion of the marriage of the sovereign or his children or of war, &c. But as their assessment included a tax on the profits of trade they were relieved from transit duties. The villages below the passes now incorporated with the Bhotiya maháls were subjected to the same system of assessment, only instead of profits of trade there was an increase under the head 'agricultural produce' arising from an additional crop. The revenue assessed on those portions was :—Juhár, 398*k*. 5*m*. 6*r*. : Dárma, 42*k*. 7*m*. ; and Níti, 125 *dumaula*. The last sum excludes the revenue due from Joshimath and other *saddbart* assignments in parganah Painkhanda.

Mutual convenience led to the commutation of the original article of tribute, and at the conquest of Juhár in 1670 A.D. by

¹ To Board, 25th April, 1821.

² The only practical mode of computing land which existed in Níti at the British occupation was by the plough of one yoke of bullocks. The quantity of land which could be cultivated by such means in one day from sunrise to sunset paid one rupee a year towards the gross assessment.

Báz Bahádnr Chand, the value of the *kanch* was fixed at twelve *kachcha* rupees, and a permanent valuation

Early assessment. was made of the commodities the produce of Tibet or Bhot which were to be received as payment in kind. As the value of these articles fell below the rates in the original schedule, it became an object with the Bhotiyas to extend their payments in them. This became a fruitful source of conflict between the Collectors of the revenue and the Bhotiyas, and resulted in an agreement by which "the proportion of the payments was ultimately established at one-half in kind, and

Traill's report. the rest in coin; and in the event of the Bhotiyas being required to pay the whole of their assessment in money a deduction of twenty-five per cent. was allowed on the portion payable in merchandize; such being, in point of fact, the actual depreciation in the current prices from the rates fixed in the original appraisement. During the government of the Rájás, the public demand continued unaltered, though subject in its liquidation to the variations arising from the depreciation above noticed, The greater part of the revenue was assigned to the garrisons of forts in the mouths of the passes and to the payment of the civil local functionaries. The residue was collected on the spot by an officer annually deputed from the court for adjudicating the civil and criminal pleas pending among the Bhotiyas. The internal management was left to the *daftaris* or *patwáris* and to the *burhas*, or heads of villages, by whom also the detailed cess was apportioned, being laid every third year wholly on the land, and during the intervening period levied in the shape of a capitation, or rather of a property tax.

The *burhas* in addition to the usual dues on marriages, &c., received a small public allowance from the rents of their respective villages. They were also assisted by petty officers corresponding with the mukaddam and kotwál of the plains. These again were similarly remunerated. The garrisons above mentioned appear to have been retained in the passes principally to protect the inhabitants from the incursions of Bhotiyas from the other passes, especially the Játs of Jumla on the Nepál side of the Káli. On the Gorkháli invasion the principal opposition to their arms was made by the Bhotiyas: for the period of nine years, after the

submission of the rest of Kumaon, the Juháris frustrated every effort made for their conquest, and it was a consideration of their commercial interests, rather than any successes of the invaders, which ultimately induced a subjection to that power. This resistance on the part of the Bhotiyas, joined to an exaggerated reputation for wealth, marked them out for peculiar exactions; the public demand rose gradually to Rs. 7,000 in Nñti, 12,500 in Juhár, 10,000 in Dárma, and 5,000 in Byáns, while in some years nearly double those sums were extorted, under various pretences, by the officers employed in the collection. The gross receipts of the inhabitants from every source of production were inadequate to answer such excessive impositions, the capital and stock of individuals were gradually dissipated in their liquidation, and ultimately a load of debt was incurred for that purpose. When both the means and credit of the individual were exhausted, emigration became his only resource; in this manner, the depopulation of the passes was rapidly taking place when the magnitude of the evil led to the interference of the Nepál Government. An officer of reputation, Bhagti Thápa, was especially deputed for the re-settlement of the Bhotiya maháls; under his vigorous superintendence the present difficulties of the Bhotiyas were, in a great degree, removed by the enforced restoration of a portion of the exactions, and by the reduction of the demands of their creditors to the mere principal sum actually advanced; while the principal source of these difficulties was cut off by a remission in the public revenue, reduced to 4,700 for Nñti, 8,000 for Juhár, 7,000 for Dárma, 2,700 for Byáns. The established principle of liquidation, half in money and half in merchandize, continued in force, but no longer afforded to the Bhotiyas its former advantages. The whole of these maháls were included in the military assignments, and their revenues were either collected by the assignees themselves, or were leased by them for a sum to some responsible individual; in either case, the demand for the half in merchandize was commonly disposed of in gross to some Almora usurer, by whom it was raised to a full equality in value with the money half at the expense of the Bhotiyas.

The Government revenue was imposed on each valley in one gross sum, and was distributed by the *bárhás* or headmen who

were the same as the *padhāns* of the lower parganahs: in this measure they always assumed the original amount of the village tribute as the standard for calculation. At the first settlement in 1815, the collections of the two previous years were assumed as the standard of assessment, and as the demand was to be paid in current coin (Farukhabad rupees), an allowance of one-fourth was made on the half hitherto paid in kind and a further reduction of the same amount to cover the discount in converting Gorkhali into British rupees. The net assessment¹ on the villages within and below the passes amounted to Rs. 11,565. In the year 1818 all the duties² on other than jungle products were abolished, and the *kanch* was reduced to one-half with the following result:—

	AREA.			Rate of cons.	ASSESSMENT IN RUPEES.	
	<i>Kanch.</i>	<i>Madha.</i>	<i>Rati.</i>		1817 A.D.	1818-19.
<i>Kumaon.</i>				<i>Rs. a.</i>	<i>Rs.</i>	<i>Rs.</i>
Juhár ...	365	3	3	6 0	5,813	2,300
Dárma ...	353	3	4	4 0	3,409	1,400
Byáns ...	71	9	0	4 0	695	280
Chaudāns,	49	9	4	5 0	532	250
<i>Garhwál.</i>	<i>Dumauila</i>					
Nídi ...	175	0	0	2 8	1,005	440
				Total ...	10,964	4,670

These totals differ slightly from the figures shown hereafter owing to alterations in area. They are taken from the actual reports of the time.³ The reductions effected were almost entirely made within sub-divisions of the parganahs lying within the snowy range. Thus in Burakueni, Burapeta, and Tallades in the lower patti of Juhár the reduction amounted to only Rs. 164, whilst in the upper patti Rs. 2,978 were reduced. Similarly in Garhwál patti Negi, Bhandári, and Tapuban were in no way concerned in the Tibetan trade, and the abatement made was only allowed in the Bhotiya villages. In the Dárma parganah, a special reduction was allowed on account of losses by the cattle plague, which then as now periodically devastates the flocks and herd of the

¹ To Board, 12th December, 1818, 30th April, 1819, 2nd July, 1819, Board's Records, 30th July, 1825, No. 3, 9th August, 1827, No. 10.
² To Board, 28th August, 1818.
³ To Board, 26th August, 1818.

Bhotiyas. The demand now fixed remained in force for the remainder of the first triennial settlement. At the second triennial settlement a progressive rise took place, based on the increase in cultivation especially in the lower portions of the patts brought about principally by the return of tenants who had fled to the western hills beyond the Satlaj owing to the exactions of the Gorkhális and finally amounted to Rs. 5,812 a year. In many cases owing to internal disputes the distribution of the assessment over the villages in each was no easy task. In his report for 1817, Mr. Traill mentions the difficulties encountered by him in Juhár. He writes—"To the gross demand no objection was made, but in settling the portion of each village it has been hitherto found impossible to reconcile all parties." A similar state of affairs existed in the previous year leading to a considerable balance being due from the parganah. Again in 1818 he writes:—"The assets of Bhot consisted principally in the profits of trade which varied in the different villages, so that a farm of each sub-division in the name of the chief proprietor would appear to be the form of management best calculated to secure the interests of the State and of the people. This system was rendered impossible : Juhár by internal dissensions. Biji Singh, the farmer of the last two years had made himself obnoxious to the people and separate farms for all three (Níti, Juhar, and Dárma) were now made." Owing to a famine which occurred at this time, the assessment was reduced by nearly a thousand rupees which was proportionately greater in Dárma and Byáns where the scarcity was most felt, and where considerable damage had been done by the incursions of the Játs from Jumla. For Dárma and Chaudáns engagements were taken from Kítu *bárhá*, and for Byáns from Sísu *bárhá*.

The settlement in 1840-41 was made by Mr. J. H. Batten. In some villages of Juhár, owing to the loss of population, bad situation, and other causes it was found necessary to reduce the revenue demand, and though these decreases were partially compensated by slight increments in other villages, the result was a deficiency on the previous assessment. At the time of settlement, Debu Patwári and the principal men among the Bhotiyas willingly agreed to distribute the increase necessary to make up the deficiency amongst

the flourishing villages of the upper patti, and the total amount of land-revenue was left the same as before. Those on whom the difference was assessed, however, soon complained with the result that the deficiency was allowed to fall on Government, and the Bhotiyas were relieved from the additional burden. Mr. Batten adds:—"Though a friend to light assessments, I am still of opinion that the Bhotiyas pay to Government a smaller share of their profits than the other inhabitants of the province; and that considering their increased and increasing resources, the reduction (consequent on the expulsion of the Gorkhâlis, and the introduction into the province of British principles of taxation) made in the revenue of the passes, as compared to that made in the revenue of the agricultural communities, was disproportionately large. Independent of revenue considerations, however, political reasons exist for depriving our frontier subjects of all grounds of complaint." In Dârma, Byâns, and Chaudâns the old light assessment was retained, but as there were numerous waste villages in this tract, it was necessary to impose revenue easily paid and which might allow the people something from which they might save for unfavourable seasons. This amounted to Rs. 904 for Dârma, Rs. 291 for Byâns, and Rs. 210 for Chaudâns. In Painkhanda, Traill's assessment in 1828 was but slightly altered and the demand remained unchanged until 1864.

The following statement shows the statistics of the several subdivisions as they stood before the current settlement was made at which many changes of an important character were effected. It gives the figures for the period from the conquest up to 1864 for Garhwâl and up to 1872 for Kumaon:—

	Number of sanads	Number of villages	Assessment in rupees.								Assessable area in bighas.				
			1815.	1816.	1817.	1820.	1825.	1828.	1830.	1841.	Total estimate- d.	Cult i- valued.	Cultu- rable.	Rate of cultiva- tion per bigha.	
Kumaon.															
Malla Juhar.	11	10	3,067	3,015	3,775	712	840	840	867	803	1,710	877	870	0 15 0	
Talla Juhar.	30	275	1,160	1,125	1,318	1,425	2,511	2,540	2,570	2,531	4,313	2,630	1,744	1 0 0	
Darma	15	40	3,308	3,625	3,700	800	883	870	904	804	5,100	4,700	1,400	0 3 0	
Byans	6	18	874	904	875	287	273	270	291	291	1,000	1,230	600	0 3 0	
Chaudans	1	20	203	1,011	203	165	210	210	210	210	770	320	361	0 10 12	
Total	63	357	9,407	10,910	8,560	2,000	6,716	6,780	6,802	6,791	13,770	8,060	8,013	—	
Garhwâl.															
Painkhanda.	24	45	1,550	1,550	922	1,040	1,001	1,270	1,300	1,294	2,100	1,634	260	0 11 3	
GRAND TOTAL	113	382	10,917	12,460	10,512	3,000	8,005	8,070	8,100	8,085	15,870	9,694	8,273	—	

The current settlement in Kumaon was made by Mr. J. O. B. Beckett in 1863-73. The profits of trade must to a certain extent be considered in making the assessment, for in order to make these profits, the Bhotiyas are allowed practically exclusive occupation of immense tracts of grazing ground ; they have also the advantage of the roads and bridges constructed at great expense and pay very little to the Tibetan government. On the other hand, they are liable to severe losses from murrain amongst their flocks and herds, and it was from a consideration of these facts that the distribution of the lump assessment on the Jubár pattis was left to the people themselves in council. They could best assess the losses from trade and murrain and make the assessment an equitable one. But still it will be the duty of our officers in bad seasons to make remissions and so ease off those losses which in commercial language may be considered an 'act of God' and are not due to causes humanly preventible. The people of the Dárma parganah are still quite differently situated from those further west. They pay more to the Tibetan government than the others and are far less civilised ; their indulgence in strong drink being one of the causes of their poverty and backwardness. The Byáns people can easily evade any order that they think vexatious by migrating to Nepál, and they have no respect for law, except so far as it makes itself felt by them. The most enterprising people in this patti are the Khampas or Tibetan gipsies who had long been traders in these parts, and were located here at the settlement and made to contribute to the revenue like other Bhotiyas—a matter they were not loth to accede to as it gave them a status as revenue-paying British subjects that they did not before possess. In Chaudáns the people can live and cultivate the whole year, and the assessment is consequently comparatively higher. The following statement gives the particulars of the current and past settlements of the areas now comprised in the several sub-divisions :—

		Number of estates.	Number of villages	Assessment in rupees.									
				1815.	1816.	1817.	1820.	1823.	1828.	1833.	1843.	Current.	
<i>Juhár.</i>													
Malla Juhát	...	13	14	3,652	3,816	3,734	751	868	878	904	875	1,485	
Goriphat	...	57	106	885	622	727	1,276	1,580	1,567	1,586	1,541	2,212	
Talládes	...	37	92	625	703	691	601	934	935	949	957	2,285	
<i>Dárma.</i>													
Dárma Malla	..	15	30	3,343	3,784	3,364	728	757	755	760	755	861	
Dárma Talla	..	4	5	45	51	35	80	110	124	144	144	168	
Chaudáns	...	11	11	256	1,027	256	165	210	210	210	210	355	
Byáns	...	7	7	874	904	873	252	273	279	291	291	517	
<i>Painkhanda</i>	...	46	76	1,550	1,550	922	1,040	1,091	1,275	1,304	1,294	1,849	
<hr/>													
Grand Total	...	190	381	10,910	12,457	10,504	4,892	5,818	6,023	6,148	6,067	9,532	

The following table shows the statistics of area, cultivation, and population :—

	Assessable area in bisls.				Rate per acre on		Population.		Area held revenue free.
	Total	Cultivated		Culturable.	Total area.	Cultivated area.	Males	F. males	
		Irrigated.	Dry.						
<i>Juhar.</i>					Rs. a. p.	Rs. a. p.			
Mallé Juhár ...	278	...	125	151	...	...	2,138	1,834	18
Goriphat ..	2,390	382	1,674	1,433	0 10 5	1 2 1	1,460	1,268	.
Talládes ...	2 664	696	615	1,351	0 13 9	1 11 10	1,486	1,391	6
<i>Dárma.</i>									
Dárma Malla ..	1,019	89	584	543	0 12 6	1 2 11	934	735	4
Dárma Talla .	348	...	335	83	0 8 5	0 11 8	299	211	.
Chaudáns ...	616	97	345	174	0 9 2	0 12 10	420	360	101
Byáns ...	393	84	269	39	1 5 0	1 7 5	910	812	..
Painkhanda.	3,142	...	2,452	690	0 12 6	1 1 4	2,829	2,694	Incl. do
GRAND TOTAL.	11,550	1,348	6,200	4,253	—	—	10,406	9,390	..

In 1881 the population of parganah Juhár comprised 9,424 souls (4,621 females) : of Darnia about 5,000 ; and of Painkhanda 7,513 (3,731 females).

Bidolsyun, a patti of parganah Dewalgarh in British Garhwál, is bounded on the north by Patti Chalansyun ; on the south by Patti Ghurdursyun ; on the west by Patti Katholsyun and on the east by Patti Kandársyun. This patti was formed from parganah Dewalgarh in 1864. The Patwári of Kandársyun, usually resident in Khandgaon, collects the land-revenue of this patti and Ghurdursyun. The patti consists of the valleys of the Pasín-gadh and another small tributary of the western Nyár.

Bidyakoti, a halting place, with dharamsála, on the route from Hardwar to Srinagar in Patti Bangarhsyun of parganah Bárshyun in Garhwál is situated in latitude $30^{\circ}-9'-52''$, and longitude $78^{\circ}-39'-58''$: distant 11 miles 3 furlongs, 12 poles from Byánsghát and 14 miles 7 furlongs 29 poles from Srinagar. The road hence to Srinagar follows the left bank of the Alaknanda river crossing the Kolásu rivulet by a 27 feet bridge (2,800 yards) to which it is undulating and thence level to the Ránibág dharamsálas, 8 miles 3 furlongs 26 poles from Deoprayág and 5 miles 2 furlongs 11 poles from Bidyakoti. Hence to the Bhainswára rivulet undulating for 4 miles, and to Janásu-Sain, an ascent of 660 yards and a descent of 520 yards, distant 9 miles 7 furlongs 33 poles from Bidyakoti. Hence level by Dhañkandi, Manjkot, and Uphalta to Srinagar, 4 miles 7 furlongs 36 poles. The hungalow is situated in a low level marsh on the left bank of the river (see SRINAGAR).

Bijlot Walla, a patti of parganah Talla Salán in British Garhwál, is bounded on the west by the Hingwa river which separates it from the Palla patti, and on the east by the De-gadh river which separates it from Patti Gujar. It lies entirely in the duáb of these rivers to their junction with the Rámanganga near Sult-ki-Mahádeo. The patwári of this patti usually resides in Dungari, and collects the land revenue of Gujar also ; both aggregated in 1864 Rs. 2,488 for *sadábart*, and land revenue, paid by a population of 5,837 souls. The road from Rámnagar to Páori passes through this patti which supports a school at Bungari.

Bijlot Palla, a patti of parganah Talla Salán in British Garhwál, is bounded on the north by patti Khátali; on the south by patti Búngi; on the west by patti Iriyakot; and on the east by the Walla Patti of Bijlot. This patti was separated from Bijlot in 1864, and at the same time the village of Negiána was transferred to Patti Badalpur Talla. The land-revenue is collected with that of Búngi by a patwári usually resident at Buret. This patti lies along the right bank of the Hingwa stream from its source to its confluence with the western Rámanga near Bhúra.

Binsar, an eminence of the lower Himálaya at the southern extremity of patti Malla Syúnara and parganah Bárahmandal in Kumaon, is distant 13 miles north-east from Almora. It contains the summer residence of the Commissioner of Kumaon and a few other houses belonging to Europeans. The view of the snowy range hence can hardly be surpassed. The elevation is 7,969 feet above the sea. There is a good road from Almora and one branching off to Hawálbág and another to Bágeswar. The station of the Great Trigonometrical Survey here lies in latitude $29^{\circ}42'26''$ and longitude $79^{\circ}47'44''$ at an elevation of 7,913 feet. Amongst the local legends of Binsar is the story of Kalbisht told elsewhere. The Doms of the neighbourhood particularly reverence his name, and before special oaths were abolished in our courts they used to take in their hands a paper or a stone wrapped in paper bearing his name as an oath instead of the Ganges water used elsewhere. It is said that the villagers of Bhúkunda once desired to divert the stream near the temple to their own fields, but the deity interposed and caused water to flow in the ravine to the right of the hut which is hence called Bur-ke-páni or the 'boom-given water'.

Birahí or Biri Ganga, a river of the Garhwál district, rises in the northern glaciers of Trisúl, 15 miles east of the village of Iláni in latitude $30^{\circ}20'$ and longitude $79^{\circ}45'$. It has two branches which join below this village. The Birahí has a course east to west and its length is about 25 miles: it joins the Alaknanda on the left bank at the village of Birahí six miles above Chinoli in latitude $30^{\circ}24'40''$ and longitude $79^{\circ}25'50''$. In 1868, a landslide fell into the lake of Gudyár Tál which supplies one of the feeders of this river, and drove out half of the water of the lake, instan-

taneously causing the river to overflow and even flooding the Alaknanda so greatly as to carry away two large wooden bridges, and sweep away some 73 persons who were sleeping on its banks at Chimoli. The Gudyár Tál is a small lake formed by the damming up of a small stream by a land-slip. It was, till the land-slip here mentioned fell, about half a mile long, it is now barely quarter of a mile long and 100 yards broad at its widest point.

Bisaud, a sub-division of parganah Bárhamandal, divided into three pattis at the recent settlement, the Malla, Talla, and Richhla. The statistics of all three may be shown thus:—

	ASSESSABLE AREA IN BISS.			ASSESSMENT IN RUPEES.				INCIDENCE PER ACRE OR.		POPULATION.		
Bisaud.	Total.	Culti- vated.		Culturable.	1815	1820	1843	Current.	Total area.	Culti- vation	Males.	Females.
		Irri- gated	Dry									
									A. p	Rs.a.p.		
Malla ..	1,408	26	1,073	308	498	68	698	1,259	14 4	1 2 4	1,367	1,168
Richhla..	504	15	388	100	115	121	143	474	15 1	1 2 10	133	373
Talla ...	515	2	374	136	141	156	198	419	13 0	1 1 8	523	442

Some account has been given of the Malla Patti. All three are close to Almora. Udyan Chand¹ was the first to disturb the possessions of the Katyuri Rajas of Bisaud in the first half of the fifteenth century. Some seventy years later Kirati Chand completed the conquest. Local tradition relates that then Raila lived at the west end of the Almora hill and Baichhla Deva, a Katyúri Rája, occupied the Khagmara fort on the south side of the hill, the former was called on to give as tribute to the Chands two live partridges every day, and wearied with the task yielded his fort; whilst the Katyúri Rája fled to Syunara, and his place was taken for a time

¹ Gaz. XI., 527, 534

by the Bisaud Rája who also eventually yielded to the Chands. The patwári of the Malla Patti usually resides in Dhárkhola and of the others in Baiganiya. There are schools in Bhainsagaon, Sail and Dhárkhola.

Bisaud Malla, a small sub-division of parganah Bárabmandal in Kumaon, is bounded on the north by Uchyúr; on the south by the Mahryúri Pattis; on the east by Sálam, and on the west by Kotauli Malli. The principal village is Tuleri. The patti was separated from Bisaud at the current settlement when two villages were transferred to Agar and one to Uchyúr and one was received from Mahryúri: see BISAUD.

Bisjyula, a patti of parganah Dhyánirau in Kumaon, is bounded on the north by Pattis Agar, Chaubhainsi, and Malli Rau: on the east by the latter patti; on the south by pattis Changadh and Chhabís Dumaula, and on the west by the latter patti and parganah Chhakháta. Bisjyúla was formed from Malli Rau at the recent settlement. The assessable area comprises 2,484 *bísis*, of which 762 are culturable and 1,722 are cultivated (199 irrigated). The assessment at the conquest amounted to Rs. 1,038, which rose to Rs. 1,377 in 1820, and Rs. 1,675 in 1843: it is now Rs. 2,226 which falls at Re. 0-14-4 per acre on the total assessable area and at Re. 1-4-8 per acre on the cultivation: 307 *bísis* are held as an endowment for charitable purposes revenue-free. The population at the time of settlement numbered 3,734 souls, of whom 2,021 are males. One village was received from Chaubhainsi, one from Chhakháta, and three from Mahryúri at the recent settlement. The patwári usually resides at Bhadrakot.

Bogsárh, a forest bungalow and halting-place in Patti Bhábar (Patli Dún) of parganah Talla Salán in Garhwál, is situate on the left bank of the Rámghanga river in the Páti Dúu in latitude 29°-34'-0 and longitude 78°-48'-30", distant 12 miles 2 furlongs 8 poles from Kalushahíd and 9 miles 5 furlongs 8 poles from Chawalchára. The road hence to the latter village crosses the Rámghanga at its junction with the Paláin river on the right bank, 2 miles 2 furlongs 4 poles. Both the bridges over the Rámghanga are made fresh every year, the other rivers are unbridged. Thence the route passes up the Paláin river, called in its lower course the Tumriya,

crossing the river three times by fords to Chawalthura, 7 miles, 15 poles. No supplies or coolies are obtainable here, the road lying through the *sal* forests of the lower hills is entirely devoid of human habitations, and is seldom traversed except in the cold weather by other than the inhabitants of the neighbouring villages.

Borarau, a sub-division of pargana *Bárahmandal* in Kumaon, divided into the *Walla* and *Palla* pattis at the recent settlement. These lie together and comprise the tract containing the head waters of the *Kosila* around and above *Someswar* to *Pinnath* and *Kausáni*. The statistics of the two pattis may be shown thus:—

Borarau.	ASSESSABLE AREA IN <i>bis</i> .				ASSESSMENT IN RUPEES.				POPULATION.	
	Total.	Cultivated.		Culturable.	1815.	1880.	1884.	Current.	Males.	Females.
		Irrigated.	Dry.							
<i>Palla</i> ...	2,158	719	686	753	898	1,694	1,884	...	2,172	1,963
<i>Walla</i> ...	1,792	723	628	541	647	1,096	1,492	...	1,426	1,315

The incidence of the land revenue in the *Palla* patti on the total area assessable is Re. 1-8-8 per acre and in the *Walla* patti Re. 1-10-11 per acre; the incidence on cultivation is Rs. 2-5-11 and Rs. 2-6-6 respectively. *Borarau* was conquered by *Kirati Chand*, and colonised by his troops from *Dhyánirau*¹ about 1490 A. D. The *Patwári* lives at *Someswar* where there is a school and another at *Salaunj*.

Bo-udiyar or *Bo-udyár*, the *Bodar*, *Bugdwar* and *Bugdoár* of travellers, a halting-place in *Patti Malla Juhár*, of pargana *Juhár* in Kumaon, is situated on the route from *Almora* by *Milam* and the *Unta-dhura* Pass to *Tibet* on the right bank of the *Gori* river, five miles from *Rargari*, 102 miles from *Almora* and ten miles from *Martoli*. *Bo-udiyar* is a small open space used by the *Bhotiyas* for their encampments at an elevation of 8,028 feet above the level of the sea. The torrent of the same name is here

¹ *Gaz. XI*, p. 535.

crossed by a *sunga* or spar-bridge. Abreast of this place the Gori tumbles in cataracts over huge masses of rock with a fall in some places of 800 feet per mile. The road from Laspa is very difficult; it crosses the river twice; once over a large *sunga* and again over four smaller ones like ladders from rock to rock in the bed of the stream, where the river has a very great fall, a little below a very lofty precipice. The whole mountain here forms a complete wall from summit to base which is washed by the stream. Besides the ladders across the stream there are several others along the road which would otherwise be impassable. In May and June, these difficulties are avoided by marching over the snow-beds that are met with at that season all over the river. When the snow melts in several places magnificent cascades are formed. In October a snow-bed was seen having a complete archway through which a stream passed which fell from a great height over a precipice immediately behind it. Below Laspa, about a mile, near the bed of Gori, large granite blocks are found; beyond it to Bo-ndiyár¹ gneiss, with granite veins.

Budhi, a only sub-alpine village of Patti Byáns in parganah Dármá of Kumaon lies on the right bank of the Palangár stream above its confluence with the Káli in latitude 30°-6'-30" and longitude 80°-41': distant 7 marches or about 62 miles north-east of Askot. The village is passed on the route from Askot to the Byáns passes into Tibet, and is situate amid some very lofty peaks of the main range of the Himálaya. Immediately above Budhi, a steep hill ridge advances from the mountain side on the north-west and extends across the valley, leaving but a narrow passage for the river. The summit Chetu-Bináyak (10,500 feet) is reached after an ascent of 1,750 feet by an easy path and thence Gárbiya, the first village in upper Byáns. The elevation according to H. Strachey of Budhi is 8,500 feet above the level of the sea.

Bungi, a patti of parganah Talla Salán in British Garhwál, is bounded on the north by pattis Bijlot Palla, and Iriyakot; on the west by the latter patti and Painún; on the south by the latter patti and the Kota Bhábar and on the east by the Sult pattis of Kumaun. The patwári of Bijlot usually resident at Buret collects the revenue of this patti also; both in 1864 aggregated for land-

¹ 'Udyár' means a cave or hollow.

revenue and *sudābart* Rs. 2,686 and for *gūnth* Rs. 45, paid by a population of 6,592 souls. This patti comprises the hilly tract lying between the Kulli river on the west, the Mandhāl on the south, and the Rāmgaṅga on the east. There are iron mines worked at Gorkhanda and Bhawāni.

Byans, a patti or sub-division of parganaḥ Dārma in Kumaon, occupies the valley of the Kuthi-Yānkṭi in the extreme north-eastern corner of the district. It is inhabited during the summer months by the Bhotiyas who occupy seven villages—Gūnji, Garbiya, Kuthi, Nābhi, Nupalchyu, Rūnkang and Wari-Budhi. The total assessable area is 393 *bis*; of which 353 *bis* are cultivated and pay a revenue of Rs. 517 per annum. The population at the time of settlement numbered 1,722 souls (812 females). An account of a trip through Byāns to the Lāpu Pass,¹ taken from Lieutenant H. Strachey's Journal, has been given under the article BHOTIYA MAHĀLS. The patwāri usually resides at Sosa : there is a school at Garbiya.

Byansghat, a halting-place on the route between Hardwār and Srīnagar, lies 6 furlongs 20 poles north of the confluence of the Nyār river and the Ganges at Byānsghat, and is situate in latitude 30°-3'-40" and longitude 78°-38'-30"; the encamping ground is distant 10 miles 5 furlongs from Chāndpur, the last stage, and 11 miles 3 furlongs from Bidyakoti or 8 miles 1 furlong 37 poles from Deoprayāg. The road hence to Bidyakoti keeps along the left bank of the Ganges river crossing the Naugaon and Kot rivulets 1,440 yards, thence undulating to Umrasu on the left bank of the Randi river, 5 miles 3 furlongs 22 poles. A short ascent leads hence to Gark-khal and a descent to the Randi which is crossed by a bridge of 56 feet span, 4 furlongs 15 poles. A short ascent and descent leads to a small rivulet, and a second ascent, descent, and level to Deoprayāg, 2 miles 2 furlongs. Hence Dharmāśās, encamping ground at Bidyakoti, 3 miles 1 furlong 15 poles. If the march is broken at Deoprayāg the next stage will be Rānibāgh, 8 miles 3 furlongs 26 poles, and Srīnagar, 9 miles 5 furlongs 18 poles.

¹ J. A. S. Ben. XVII. (2), 527: see further the articles Chāndās, Rākas Tāl, &c.

Chachaka, or more correctly **Tsá-Tsáka**, a great salt field in Hundes, from which most of that imported into northern Kumaon and Garhwál is brought. The lake which gives its name to the tract is situate in north latitude $32^{\circ}-42'-0''$ and east longitude $81^{\circ}-55'-0''$, at an elevation of over 15,000 feet above the level of the sea in the Zung of Rudukh and province of Nári in western Tibet. The lake is almost connected with a larger one, the Nagong-cho, and was visited by an explorer in 1868, who states that an area of about twenty miles by ten is all about on a level with the lakes. This space is filled with salt, the water having evidently at one time covered the whole. Borax fields were seen at Ruksum and Chachaka, and numbers of people were working on them. No gold or salt mines were seen or heard of between Thok-Jalang (*q. n.*) and Mánasarowar, but numerous borax fields were seen, at one of which one hundred men were at work near a camp of some thirty tents. The borax generally was said to find its way to Kumaon. The Lhása authorities levy a tax of about half a rupee for ten sheep or goat loads, about three maunds or 240lb. The value of the trade in borax and salt by the passes from Nilang to Byáns for four years is as follows:—

	1879-80.		1880-81.		1881-82.		1882-83.	
	Maunds.	Rs.	Maunds.	Rs.	Maunds.	Rs.	Maunds.	Rs.
Borax,	18,948	94,616	38,536	1,70,730	33,821	9,02,926	21,527	1,72,216
Salt ...	39,785	1,81,681	37,531	1,55,790	27,717	1,10,868	34,946	1,39,784
Total ..	58,733	2,76,297	66,067	3,26,520	61,538	3,13,794	56,473	3,12,000

Taking the weight carried in 1882-83 and an average of six trips during the season, and ten sheep or goats for every three maunds, the number employed would be about 32,000 for the passes alone, setting aside those used for carrying other articles, such as wool, drugs, &c., and the animals employed in carrying the borax and salt from the fields beyond the frontier to the nearest mart.

Chakrata or **Chakaráota**, a cantonment for British troops in Khatt Birman of Jaunsár-Báwar in the Dehra Dún district, is situate in north latitude $30^{\circ}-32'-20''$ and east longitude

77°-54'-30", at an elevation of 6,885 feet above the level of the sea, 25 miles from Kálsi and 40 miles from Mussooree by the hill road. The cantonments have an area of 4,285 acres, or 6·7 square miles. The population in September, 1880, numbered 1,828 souls, of whom 60 were Europeans, 1,081 were Hindus, 649 were Musalmáns, 8 were Eurasians, 27 were Native Christians, and there were three others. These are all either traders or camp followers. Previous to 1866, the site of the present cantonments consisted of a range of grass-clad hills with forests more or less dense running up on all sides from the valleys below. The ground was used solely for grazing purposes, and a few low sheds here and there were the only signs of civilization. The road from Mussooree to Simla passed over these hills, and the fair expanse of comparatively smooth topped hills early attracted the notice of military men and became the subject of correspondence when the question of hill sanitaría for British troops arose. The supposed unlimited supply of good water at a high level on the Deoban range of hills marked the place as in every way suitable for a military station.¹ Operations commenced in 1866, but no troops came until 1869, when some Sappers were stationed here. These were succeeded by H.M.'s 55th Regiment under Colonel Hume, and it is to the interest taken by him and his men in the station that its rapid strides towards completion may be in a great measure attributed. For the first year the troops were occupied in road-making, clearing sites and building, they occupying temporary huts, but now substantial barracks have been built and a magnificent cart-road, seventy-seven miles long, connects the station with Saháranpur by Timli and Kálsi. The original buildings and the road cost fifty-four lakhs of rupees, and most people consider that some less substantial buildings and a less expensive roadway would equally have subserved the objects contemplated. There is a Cantonment Magistrate's court, post-office, money-order office, savings bank and telegraph office. There is no church, divine service being held in the gymnasium. The water-supply from the Deoban hill, though not quite so unlimited as was at first supposed, is good and ample. If more be wanted, springs further off can be tapped. A scheme for bringing the water into cantonments is now in progress of execution.

¹ From a note by Mr. H. G. Ross, C.S.

Only one regiment is at present stationed here, but sites have been cleared for the accommodation of another, and also for a convalescent depôt. The Simla and Mussooree road passes through the cantonments, where there is a good travellers' bungalow 106 miles from the former and 40 miles from the latter. There is another bungalow on the road to Mussooree at Lakhwár, 14 miles from Mussooree, and another is under construction between Lakhwár and Chakráta. The scenery around Chakráta is wild and grand, and on the Simla road some of the finest views in the hills are to be obtained, but there is no shooting near the station and nothing to attract the sportsman. The cantonment funds in 1882-83 showed an income of Rs. 8,483, of which Rs. 1,672 were raised by a watch and ward tax; Rs. 2,524 by the sale of grass and wood; Rs. 957 by voluntary subscriptions; Rs. 1,866 by grants from the Imperial government, and the remainder by conservancy fees, pounds, fines, and rents. The expenditure for the same year amounted to Rs. 8,559, of which Rs. 1,535 were for police; Rs. 4,425 for conservancy and establishment; Rs. 699 for public works; and Rs. 1,900 for miscellaneous charges.

Chalansyün,—a patti in parganah Dewalgarh of British Garhwál, is bounded on the north by the Ganges, which separates it from Tihri; on the south by patti Bidolsyün; on the east by patti Bachhansyün; and on the west by Patti Katholsyün. This patti was formed from Dewalgarh in 1864. The patwári of Bachhansyün residing in Nawása collects the land-revenue of this patti. There is a school at Dúngari. The patti contains the villages along the Dewal and Dúngari streams, two small affluents of the Ganges. Near the source of the Dúngari, the Gandkhola peak attains an elevation of 7,553 feet above the level of the sea.

Chalsi or Chálsí, a patti of parganah Káli Kumaon in Kumaon, is bounded on the north by patti Rangor; on the west by Sálam Talla and Malli Ráo; on the south by Pharka and Asi, and on the east by Gangol. The principal villages are Bairukh, Ijuta, Gágar, and Kúnikot. The assessable area comprises 3,393 *bars*, of which 1,014 are culturable and 3,378 are cultivated (84 irrigated). The land tax yielded Rs. 910 in 1815; Rs. 1,348 in 1820; Rs. 1,579 in 1843, and now stands at Rs. 2,578, which falls on the total

assessable area at Re. 0-12-2 per acre, and on the cultivation at Re. 1-1-4 per acre. There were 631 *bísís* held free of revenue as *gúnth*. The population at settlement comprised 2,501 males and 1,978 females. This and Asi were formerly united, they lie to the extreme west and north-west of the parganah and extend towards Deo Dhúra and the valley of the Panár. The villages are numerous and the inhabitants are prosperous, but towards the west the soil is somewhat poor. Chálsi received two villages from Sálum at the recent settlement. The patwári usually resides at Jjta : there are schools at Ríthakhál and Dúngarakot.

Chamoli, a small market-place, on the left bank of the Alaknanda, on the Srinagar and Níti road in patti Talla Dasoli of Garhwál, is situate seven miles north of Nandprayág. There is a pilgrim dispensary, a few shops for the sale of grain, and several dharmisálas or rest-houses here, and in the winter a school for the children of Bhotiyas who come here to graze their flocks and herds on the flats along the river. The pilgrim road from Kedárnáth by Ukhimath, and Gopeswar joins the Níti road here and passes the Alaknanda by an iron truss bridge of 110 feet span. Chamoli was the scene of the disaster owing to the bursting of the Gudyár Tal (*q. r.*) noticed elsewhere.

Champawat or Champháwat, a village in Patti Chúrál Pulla of parganah Káli Kumaon in Kumaon, lies in latitude 29°-20'-11" and longitude 80°-7'-84" at an elevation of 5,546 feet (Tahsili) above the level of the sea, 54 miles south-east of Almora. The population in 1881 was 358. It is, however, important as the head-quarters of the Sub-Collector of the land revenue (tahsildár) of parganah Káli Kumaon, and the site of a police-station, both of which are situated within the enclosure of the old fort. The rocks of Champawat are partly gneiss, which having become disintegrated in many places, have given way and, according to McClelland, caused the destruction of the greater part of the old buildings. It was the residence of the landholders styled Rájás of Kumaon before they transferred their seat to Almora in the middle of the sixteenth century. The old palace is now in ruins, but the fort partly remains. Amidst the ruins of the palace, of which the base and doorway of a balcony alone remain, is a fountain about ten

feet square outside the quadrangle, and near to it are three or four temples on a level area about one hundred feet square hewn into the solid rock. They are each polygonal at the base twenty feet in diameter and surmounted by an arched dome; all being constructed of stone with good taste and elaborate workmanship. They must be of considerable antiquity as some apparently cœval ruins situate above the temples are in many places overgrown with forests of aged oaks. The elevation above the sea is considerable, but still from its position in a valley the site is said to be unhealthy. Owing to this cause, the cantonments were removed from Goril-Chaur in 1815 to Lohughál, six miles further north. Close to the fort is a fine clump of *deoddr* trees enclosing the temple of Ghatku Deota, in whose honor a fair is held annually. The mound on which the temple is built is said to be the Kurmáchal of the Skanda Purána, because on this spot Vishnu assumed the Kurmá or tortoise incarnation. The name Kumaon is said to be a corruption of Kurmáchal and the tract of which Champáwat is the centre is now known as Káli Kumaon¹; "the Kumaon near the river Káli" to distinguish it from other Kumaons. It was not till the accession of the Chands to power that the name of their principal residence was given to the whole district.

Ohandi, a portion of the Bijnor district formerly belonging to Garhwál, generally known as Chandi Pahár. It is bounded on the west by the Ganges, on the south-east by the Paili Ráu up to its junction with the Khara Sot; from thence the boundary runs up the Khara Sot about 2½ miles, turns up into a small tributary in a north-westerly direction, crosses a low ridge, and goes into the Ghasirám Sot, continuing along this Sot to its junction with the Ganges. The whole tract is densely covered with forest, the nothern slopes with *sál*, and the base and depressions with bambus, but any valuable timber that it once possessed has been used up for charcoal for the Roorkee workshops. Chaudi frequently appears in the old records. We find the ubiquitous Major Hearsey laying claim to it at the conquest as a portion of

¹ There were two divisions, (a) Kumaon including Shor, Gangoli and Chaugarkha; and (b) Káli Kumaon, including Dhyánirau, Chaubhainsi, and the other pattiis of Káli Kumaon. The people are called Kumái, but ordinarily in common conversation they call themselves by the name of their own patti, all the rest being known as Khasiyas.

the bargain that he made with the exiled Rájá of Garhwál to restore him to his possessions. His pretensions were purchased by the British Government for a good sum, and it may be as well here to record some of the facts concerning its history.

In 1817, a portion of the Chandi taluka, extending from Anjani ghát to Rikhikés, and including seven inhabited and nine deserted villages, was annexed to the Dun. These were assessed at a varying demand, amounting to Rs. 1,113 in 1821 and Rs. 335 in 1828, and for five years subsequently at Rs. 259 a year. The portion remaining in Garhwál was settled for five years by Mr. Traill, 1819-20, at Rs. 1,147, being an increase of Rs. 87 over the previous revenue, *plus* Rs. 2,501 for the *deh-i-ek* or title on forest produce. Fourteen villages were transferred to the Dún in 1828 and settled at Rs. 6,834 by Mr. Shore. Traill writes in 1833 : — "The taluka was partly in Saháranpur and partly in Moradabad before its annexation to Garhwál and the Dún, and the periods of the leases differed from each other and the parts of the province to which each was annexed." It is consequently difficult and indeed of not much moment to trace out the actual revenue. The settlement of the Saháranpur portion expired in 1831, and a new settlement up to 1836 was made. The settlement of the Moradabad portion expired in the following year, and the new assessment was also made up to 1836. The country is described as being almost entirely jungle and with little cultivation. "To the natural impediments are added insecurity of life and property, in consequence of the constant incursions of dákáits from across the Ganges. Such are the facilities for concealment afforded by the dense jungles and islands in the Ganges covered with *sissu* forest that no establishment of police could successfully cope with them." In 1836-37 a new settlement was made for five years. Cultivation had decreased: out of 25 villages, 11 only were inhabited; in three others there was a little cultivation, and 11 were altogether waste. This state of things was due to two causes, the general unhealthiness of the climate and troubles from dákáits. Owing to the latter cause one village was wholly and two were partially abandoned during the previous settlement, and were now

handed over to the farmer of forest produce. The former settlement amounted to Rs. 3,673, and the new one to Rs. 3,718, including Rs. 25 fees paid by gold-washers. At the expiration of this settlement in 1841 it was continued for another year, and then the low-land portion of talukas Chandi and Mahuakot were annexed to the new district of Bijnor in October, 1842. These comprised then seven inhabited and four waste villages assessed at Rs. 719; grazing dues, Rs. 300; forest dues, Rs. 4,818, and gold washing Rs. 32; total Rs. 5,869. The boundaries were Kunáo on the north close to the Ganges and the exit of the Rawásan stream on the east.

Chandpur.—A parganah of Garhwál, contains eight pattis or sub-divisions, each of which is separately noticed, viz, Chandpur, Sili, Chandpur Taili, Choprakot, Cháuthán, Dháijyúli, Lohba, Rání-gadh, and Sirgúr. The assessment of the land-tax at the various settlements was as follows:—

1815.	1816.	1817.	1820.	1823.	1828.	1832.	1840.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
5,092	5,916	6,433	7,850	8,993	9,345	9,425	9,190	

At the last settlement there were 296 estates comprising 414 villages, containing an assessable area of 14,427 acres, of which 12,667 were cultivated. The land revenue of 1861 amounted to Rs. 8,820, of which only Rs. 40 were assessed on *gúnth* lauds; of the current assessment Rs. 189 are alienated. The water mill-rent amounted to Rs. 488. The land-revenue falls on the total assessable area at Rs. 0-11-5 per acre, and on the cultivation at Rs. 0-13-1 per acre. The population in 1841 amounted to 11,032 souls (5,734 females); in 1853 to 25,017 (12,409 females); in 1858 to 22,950 (11,181 females); in 1872 to 31,381 (15,738 females); and in 1881 to 35,489 (18,153 females). Chandpur is the central parganah of Garhwál and is characterised by lofty and steep mountain ranges covered with forest, which separate the Pindar from the Rám-ganga, and the different streams which form the latter river from each other. Sili and Taili Chandpur possess some fine villages on the lofty slopes around the fort which was the seat of the first rulers of Garhwál as a whole before Dewalgarh and Brínagar were founded.¹ Many of the villages consequently belong to the Purohiths of the Rájyas, Brahmans of the Kandúri clan. "Lohba, from

¹ *Gaz.* XI. 524, 526, 608.

its position on the frontier between Garhwál and Kumaon," writes Batten, "was the scene of conflicts between the forces and inhabitants of the two rival districts; and owing to this and similar posts along the whole line of frontier, the Gorkhális were kept out of Garhwál for twelve years after they had obtained possession of Kumaon.¹ The people of Lohba are consequently a fine manly race, and at present make very good soldiers. Patti Choprakot extends from east to west over a large space of wild country, and in some parts the villages are but scantily interspersed along the high wooded ranges. The people are for the most part poor, except at the south-east extremity, which borders on Páli in Kumaon, and approaches in fertility and population to the prosperous state of its neighbourhood. The good effects of the settlement in 1840 soon became apparent, especially in Choprakot, and some villages in the neighbourhood of Kainúr, where was formerly a tahsildári establishment, and its abolition had removed one market for the sale of produce. The people of Choprakot also have not the benefit enjoyed by those of Lohba and Chandpur, of the pilgrim road running through their district. Good paths, however, now exist over the high ranges on every side, and communication with Srinagar, Kumaon, and the northern parganahs from which the landholders have to procure their salt and wool, has become comparatively easy. A good road along the line of the Nyár river and over the southern mountains now connects this tract with the principal routes leading to the markets of Rámnagar and Kotdwára and other marts for hill produce at the foot of the hills. Large quantities of hemp of the very best quality, in addition to grain, are grown.

Chandpur Sili,—a patti of parganah Chandpur, in British Garhwál, is bounded on the north by the Pindar river, which separates it from Kapíri; on the west by patti Taili Chandpur; on the south by patti Choprakot and Lohba, and on the east by patti Sirgur. It was formed from Chandpur in 1864. The patwári of this patti resides at Kewar and collects the revenue of patti Karakot and Sirgur, also which in 1864 aggregated Rs. 2,743 for *sudábant* and land-revenue, and Rs. 53 for *gúnth* paid by 6,075 souls. Chandpur Sili occupies the valley of the Bharárágár, a

¹ See Gaz. XI. 566, 570, 572.

tributary of the Pindar, and the tract between it and the Pindar to the north. The principal villages are Adbadri (*q.v.*), Khál opposite the old Fort of Chandpur, Beni-Tál with a tea factory, Bhagoti with a school, Simli, Ratora, and Bugoli in the Pindar valley. The peaks of Bintál rise to 8,300 and 7,479 above Málsi and Adbadri respectively, by which the road from Lohba to Karnprayág passes on to Simli on the Pindar. There are iron mines at Búdera, Chulakát, Gabúpani, Gaundiya, Bamli, and Rájbunga in working order and old mines at Naunyálu, Rái, Párna, Agura-Totnair, Lamlyána, and Rátapahár. There are old copper mines at Bagoli, Satúwa, Jasyáni, Khargaunda, Kalsaun Nagara, and patti Kamala.

Chandpur Taili,—a patti of parganah Chandpur, in British Garhwál, is bounded on the north by patti Ránígdh; on the west by pattis Kandársyún and Bachhansyún; on the south by pattis Dhaijyúli and Choprakot, and on the east by patti Chandpur Sili. The patwári of this patti usually resides at Simli and collects the revenue of Kapíri also; both aggregating in 1864 Rs. 2,162 for *saddbani* and land-revenue, and Rs. 278 for *gásth* paid by 5,085 souls. In 1864, six villages were transferred to Kandársyún. The road from Lohba to Páori passes through this patti by Gyúnlad, other villages are Pandwálmí Naini, Bandalí with a school, and Dharkot.

Chandpur Fort,—situate in patti Sili Chandpur and parganah Chandpur of British Garhwál, in latitude 30°-10' longitude 79°-12'. This fort was the seat of Kanak Pál, the actual founder of the present Garhwál dynasty, and whose descendant, Ajaipál, consolidated the ráj of Garhwál. It has also given its name to the parganah. The fort is situated on the peak of a promontory formed by the bend of a stream flowing some 500 feet below it. The walls and some of the ruins of the dwelling-houses are still standing. The walls must have been very strongly built, as they are formed of large slabs of cut stone; the space within them may be one and-a-half acres. It is said that an under-ground passage was dug from the fort down to the stream as water was only procurable from there, and that the mouth of it is visible near the stream, but no trace of it is to be found in the fort.

There are also two flights of steps, each formed of one solid block of stone, which are said to have been quarried in the Dūdú ke-toli range, a march and-a-half distant from the fort, though the actual place is not now known. It is hard to conceive how these blocks were brought to the spot over such a precipitous country; but the legend is that they were carried by two huge goats, both of which died on arrival at the fort. The road from Lohba to Karnprayág passes close by the walls.

Chandpur-ke-Manda, a village and halting-place in patti Dhāngu Talla of parganah Ganga Salān in Garhwāl on the route between Hardwār and Srīnagar lies in latitude $30^{\circ}-3'-40''$ and longitude $78^{\circ}-33'-48''$ distant 12 miles 32 poles from Bairaguna, and 10 miles 5 furlongs from Byānsghāt. The road hence to Byānsghāt keeps along the left bank of the Ganges river passing the Dabari rivulet level and ascending to Kotalibel, 460 yards, total 1m. 3f. 11p. from Chandpur. Hence a short descent and level to Semāla rivulet and ascent, level and descent to the ghāt rivulet, 4m. 3f. 11p. level and ascent to Kandi-khāl and descent to Kal-gadh rivulet, 2m. 4p. Hence level to Bhairon-khāl for 2,520 yards and descent to Byānsghāt where there is a bridge of 92 feet span across the Nyār river, 1m. 7f. 25p. Thence an ascent of 6f. 20p. leads to the Dharamsālās and encamping-ground. The route from Byānsghāt to Srīnagar may be by Bidya-koti, 11m. 3f. 12p., and Srīnagar, 14m. 7f. 29p. or by Deoprayág 8m. 1f. 37p.: Rānibāg 8m. 3f. 26p., and Srīnagar 9m. 5f. 18p. The road is hot and low and the quicker marches are recommended.

Changail or Chāngsa-khāgo, a high mountain ridge forming the boundary between the Native States of Bisāhr and Garhwāl; also a pass on the road between those states leading up the valley of the most remote feeder of the Baspa. This route is one of great difficulty and danger as, except during the rains, it is blocked up by snow. Gerard in 1818 vainly tried to induce a guide to conduct him over it, though in former times it seems to have been used frequently by Kunāwari free-booters. Some notion of its difficulty may be gathered from the fact that Gerard, a few days afterwards, crossed the Charang Pass, having an elevation of 17,348 feet without interruption while this was deemed impracticable. In the Great

Trigonometrical Survey, a cone with an elevation of 21,178 feet is laid down, in latitude $31^{\circ}-13'-0''$ and longitude $78^{\circ}-35'-0''$; and a comparison of this position with that assigned to the pass by approximation in Gerard's map of Kunáwar will indicate that the cone is about two miles south-west of Chángsail, which must consequently have a very considerable elevation. The position is laid in Gerard in latitude $31^{\circ}-14'-0''$ and longitude $78^{\circ}-33'-0''$.

Chamnaon, a halting-place on the road from Páori to Almora and Rámnagar, in patti Kingadigár of parganah Chaundkot in Garhwál, lies in latitude $29^{\circ}-56'-50''$ and longitude $78^{\circ}-55'-40''$: distant 12 miles 25 poles from Toli and 12 miles 7 furlongs 29 poles from Kúnjoli. The road hence to Kúnjoli descends across the Machhlád river at Rájsera, 1 mile 3 furlongs 36 poles, and thence passing the Silet stream, ascends to Ubotihár, whence a level stretch brings it to the Kamera stream, 1 mile 6 furlongs 11 poles. From Kamera, an ascent leads to Seriyadliár, crossing the road from Kotdwára to Rámnagar, quarter of a mile on; thence by Bina, Chaubat-khál and Bhúichilam to Tilkhani-khál, 5 miles 3 poles. The road then descends to the Chhánchirau bridge, 1 mile 3 furlongs 15 poles, and passes by the Garhkot rivulet to Kúnjoli (3 miles 2 furlongs 4 poles) on the left bank of the Pachír-r-gadh. The stage to Toli has been noticed under TOLÍ.

Chárál Malla, a patti of parganah Káli Kumaon in Kumaon, is bounded on the north by Regarubán and Gúmdes; on the west, by Súibisang and Sipti; on the east, by Gúmdes and Khilpatti-phut; and on the south by Chárál Talla. This patti was separated from Chárál at the recent settlement. The principal villages are Khún and Majerha. The assessable area and other statistics of the Malla and Talla pattis may be shown thus:—

Chárál.	ASSESSABLE AREA IN BYES.				ASSESSMENT IN RUPEES.				POPULATION.	
	Total.	Cultivated.		Culturable.	1818.	1858.	1862.	Current.	Males.	Females.
		Irrigat-ed.	Dry.							
Malla ...	1,182	25	516	561	300	353	471	806	894	715
Talla ...	2,100	384	1,493	1,813	511	1,008	1,322	1,306	1,493	1,381

The land-tax falls on the whole assessable area at Re. 0-10-11, per acre, in the Malla and at Re. 0-9-7, per acre, in the Talla patti; the incidence on the cultivation being Re. 1-5-5 and Re. 1-0-3 per acre respectively. The revenue-free holdings for temple and personal service amount to 19 *bais* in the Malla and to 288 *bais* in the Talla patti. Chárál gave two villages to Khilpattiphát, five to Sipti, six to Súibisang, and two to Tallades at the recent settlement, and received two from Tallades. The patwári usually resides at Champáwat, where there is a school.

Chárál Talla, a patti of parganah Káli Kumaon in Kumaon, is bounded on the north by Chárál Malla; on the west by Gangol; on the south by Palbelon Malla; and on the east by Khilpattiphát and Tallades. This patti was separated from Chárál at the recent settlement. The principal villages are Chaikúni-Bora, Champáwat, and Phúngar. The patwári usually resides at Marlak. The statistics are given under the Malla patti. A few villages of Chárál are high in the mountains and a few in the forest, but the greater number are on a level. Umba Datta writes: "The cultivation is extensive and the climate excellent; but in the winter, men and cattle are nearly all obliged to leave their homes and repair to the Bhábar. On this account the spring crops are neglected and poor. The four tribes of Tarági, Bora, Chaudhri, and Karki or Kharku and their headmen or Búrhas were in former days counted great men, and held their lands rent-free in *jágir*. Up to 1816, their homestead villages remained revenue-free, but these also were then placed in the revenue-paying area. The Búrhas of each tribe were honored with *búrhachári* as well as *thokdári* leases; their brethren, though having no other means of livelihood, are still, from family pride, averse to personal labour in the fields and to load-carrying, and many of them have become poor."

Chaubhainsi, a patti of parganah Dhyánirau in Kumaon, is bounded on the north by Mahryúri Bichhli; on the west by the same patti and Bhajyúla, on the south by the latter patti; and on the east by Bisjyúla and Malli Rau. The assessable area comprises 1,780 *bais*, of which 891 are culturable and 889 are cultivated (six irrigated). The land-tax amounted to Rs. 808 in 1815, to Rs. 815 in 1820, and to Rs. 803 in 1843. It is now

Rs. 1,129, which falls on the total assessable area, at Rs. 0-10-2 per acre, and on the cultivation at Rs. 1-6-4 per acre. The population, at the time of settlement, numbered 26,518 souls, of whom 12,400 were females. This patti comprises the basin of the Ladhya river, and extends from Deo Dhúra on the north to the Bhábar on the south, occupying the high ranges which separate Dhyánirau from Chhakháta and Mahryúri. The chief possession of the people consists in large herds of cattle for which the mountains afford admirable pasture-grounds, and which they take down in the winter to Chorgaliya and other places in the Bhábar. Some of the villages, such as Dini and its hamlets Maithi and Majhiáli, are large and populous. The patti yields most abundant crops of rice and wheat, as well as of the coarser grains and turmeric; the *básmati* rice of the *sera* (irrigated) land being very famous, but it is not favourably situated in regard to markets. The irrigated lands at Kulyál and Chaunda, which form so beautiful a tract on the banks of the Ladhya belonging chiefly to the three tribes of Bora, Mahta, and Kulyál, and their headmen are accounted wealthy. One village was transferred to Biejyúla, two to Chaugadh and four to Talli Rau, at the recent settlement; whilst one was received from Talli Rau. The patwári usually lives in Pataliya.

Chaudáns, a patti or sub-division of parganah Dárma in Kumaon, lies between the Káli and the Dhauli from their confluence northwards. It is only about 12 miles in length, and about eight miles in breadth, containing probably about 100 square miles of mountainous country between Khela and Nirpaniya-dhúra. The inhabitants are Bhotiyas who occupy some eleven villages assessed at only Rs. 210 per annum, *viz.*, Búnglúng, Jyúnti, Rúng, Pungla, Chhalmá-Chhilasaun, Pínala Bhatkot, Suwa, Tantagión-raunta, Sosa, Dharpongo, Sirdang, and Sirkha. The total assessable area is 616 *bits*, of which 442 are cultivated, and the population at settlement numbered 780 souls (360 females): see BHOTIYA MAHÁLS. The patwári usually resides at Sosa and there is a school at Sirdang.

Chaugadh, or Chaugarh, a patti of parganah Dhyánirau in Kumaon, is bounded on the north by Chhabís-Dumaula, Biejyúla, Malli Rau and Talli Rau; on the east by Talli Rau; on the south by the Dhyáni Rau Bhábar; and on the west by Chhabís-Dumaula.

Chaugadh was separated from Patti Talli Rau at the recent settlement. The total assessable area comprises 2,983 *béis*, of which 1,026 are culturable and 1,956 are cultivated (52 irrigated). The land-tax, at the conquest, amounted to Rs. 418, which rose in 1820 to Rs. 650, and in 1843 to Rs. 785. It is now Rs. 1,819, which falls on the total assessable area at Re. 0-9-9 per acre and on the cultivation at Re. 0-14-10 per acre. The population, at the time of settlement, numbered 2,754 souls, of whom 1,485 were males. Seven villages were received from Malli Rau and two from Chaubhainsi at the recent settlement. The patwari resides in Gágari, where there is a school.

Chaugaon, a patti of parganah Phaldákot in Kumaon, is bounded on the north by Athágúli Walla ; on the west by Malli Doti ; on the south by Dhúraphát ; and on the east by Ryúni, Dwársaun, and Kandárkhúwá. The road through Khairna to Ráníkhét passes through it, along the Kuchgadh stream. The principal villages are Bajna, Chamoli, Khagyár, Khyúnsáikot, and Túnakot. The assessable area comprises 2,791 *béis*, of which 514 are culturable and 2,277 are cultivated (97 irrigated). The land-tax yielded Rs. 1,879 in 1815 ; Rs. 2,070 in 1820 ; Rs. 2,275 in 1843 ; and is now Rs. 2,919, which falls on the total assessable area at Re 1-0-9 per acre, and on the cultivation at Rs. 1-4-6 per acre. The population at settlement numbered 4,926 souls, of whom 2,491 were males. Chaugáon gave five villages to Dhúraphát, three to Kandár-khúwa, three to Malli Doti, and received 10 from Dhúraphát at the recent settlement. The patwari usually resides in Bamsyún, where there is a school.

Chaugarkha, a parganah in Kumaon, contains eight pattis, each of which is separately noticed—*vis.*, Dárún, Kharáhi, Lakhanpur Malla and Talla, Ríthágár, Rangor, and Sálam Malla and Talla. It comprises 362 maháls or estates containing 474 villages. The assessment of the land-tax at each successive settlement was as follows :—

1816.	1817.	1818.	1820.	1822.	1828.	1833.	1843.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
3,991	4,433	5,046	6,778	7,444	7,677	7,800	8,012	15,971

The total assessable area comprises 22,306 *béis*, of which 7,235 are culturable and 15,071 are cultivated (723 irrigated). The land

revenue falls on the total assessable area at Re. 0-11-5 per acre, and on the cultivation at Re. 1-10-0 per acre. The population, at the time of the present settlement, numbered 14,802 males and 12,643 females : in 1872, 17,766 males and 12,534 females, and, in 1881, 15,416 males and 14,385 females. One thousand three hundred and forty-five *báris* are held free of revenue for the support of temples, and 163 *báris* in *mudfi*. The Sarju forms the boundary to the north and east, as far as its junction with the Panár: the latter forming the great drainage channel for all the southern portions of the parganah. To the west, the drainage falls into the Suwál, an affluent of the Kosi, which in its turn joins the Ráinganga and the Ganges. Thus we have in the centre of the parganah, near the Saindeo ridge, spots, within a few yards of each other, where springs are found which go to feed the Ganges on the west and the Sánda on the east, whose waters do not again mingle until the extreme southern point of the North-Western Provinces is reached in the Ballia district. The name of the parganah is derived from its four principal patti, Sálam, Lakhanpur, Dárún, and Rangor. The two former are highly cultivated and thickly inhabited, the *talidon* or valley lands, especially in Sálam, being famous for crops of the finest rice; whilst the *upardon* or uplands have generally a good soil which produces hemp of fine quality. These portions are occupied chiefly by Bisht, Banola and Diúri Rájputa, and, in Lakhanpur, Tiwári and Pande Brahmans are numerous. The road to Pithoragarh from Almora, crossing the Suwál river at Supai, passes through Lakhanpur. The Dárún sub-division is celebrated for the great temple of Jageswar noticed elsewhere. The noble scenery of the range on which the temple is built is still further beautified by one of the largest groves of *deodar* trees still existing in Kumaon. The patti is, however, poor, and the portion near the Sarju is still backward in cultivation: both this patti and Rangor resembling Gangoli in many respects. The lower portions of Rithagár are unhealthy and backward; whilst the uplands are well cultivated and thickly inhabited. The mineral deposits of Kharábi are well known, though little worked. They consist of copper mines at Gaulgaon, Kapau and Agar, and iron mines at Lobh. There are copper mines also at Chimakholi in Rangor and iron mines at five places in the same patti, four in Dárún, two in Lakhanpur Malla, and one in Sálam Malla, all let for

Rs. 626 per annum. The remains of the fort of Padyárkot are the only traces of the independent Khasiya Rájás of this parganah now existing.

Chaukot Malla, a patti of parganah Páli Pachháon in Kumaon, is bounded on the north by Chauthán and Lohbá of Garhwál; on the west by the former patti; on the east by Lohbá and Palla Giwár, and on the south by Bichhla Chaukot and Talla Giwár: 33 villages were received from the Talla patti and 16 transferred to it, and 46 were transferred to Giwár Talla at the recent settlement. The entire patti is drained by the tributaries of the Binau river, an affluent of the Ráunganga, of which the two eastern branches drain the Chauthán patti in Garhwál. The road from Almora to Srínagar by Ganái runs from east to west through this patti by Goluna, Kheláni bungalow, and Bhakurha. The patwári usually resides at Deghát, where there is a school. The principal villages are Chintoli under Nāghúla, Uprárlí, Bharsoli, Kotsari, Kamaleswar, Pátharkhola, Ghúgúti, Goluna, and Jaikhál. There is an old temple at Taldhár under the Lálnagari peak (5,348 feet), close to the road, but of no importance. The statistics of the Malla Bichhla and Talla pattis may be shown thus:—

Chaukot.	ASSESSABLE AREA IN <i>bis</i>				Assessment in <i>rupees</i> .				Population.	
	Total	Cultivated		Culturable.	1815.	1820.	1843.	Current.	Males	Females.
		Irrigation	Dry.							
Malla ...	5,102	104	3,861	4,136	1,732	2,278	2,425	3,576	3,419	3,160
Bichhla ...	5,124	106	3,903	1,115	1,797	2,491	2,552	4,178	3,314	3,049
Talla ...	3,893	93	3,169	635	1,304	1,709	1,677	3,310	3,193	3,033

There are small patches of revenue-free land in each patti. The incidence of the land-tax per cultivated acre in the Malla patti is Re. 0-14-5, in the Bichhla is Re. 1-0-4, and in the Talla is Re. 1-0-8 per acre.

Chaukot Bichhla, a patti of parganah Páli Pachhāon in Kumaon, is bounded on the north by Garhwāl and Malla Chaukot; on the south by Garhwāl and Talla Chaukot; on the west by Garhwāl; and on the east by Talla Chaukot. This patti was formed from pattis Malla and Talla Chaukot at the recent settlement. It occupies the upper valley of the Khátligadh, a tributary of the Eastern Nyár river on the west, and the Binau river, a tributary of the Western Rám-ganga on the east. The road from Almora to Srinagar by Mási passes through the centre of the patti from east to west from Diúli to Saráikhet. The principal villages are Bhakuna, Chakragāon, Kuhadgāon, Timli, Jaspur, Tanba-Dhaund, Masmoli, Udepur, and Chanoli. The ridge forming the waterparting between the eastern and western divisions contains the peaks of Banj-ki-dera and Juniyagarh (6,780 feet). The statistics will be found under CHAUKOT MALLA. The patwári usually resides at Jaspur, and there is a school at Syáido.

Chaukot Talla, a patti of Páli Pachhāon in Kumaon, is bounded on the north by Chaukot Malla; on the west by Chaukot Bichhla and Malla Sult; on the east by Talla Giwár and Walla Nayan; and on the south by Malla Sult and Palla Nayan. It contains on the west the Potgadh-ke-rauli and its tributary stream, and on the north-east the lower course of the Binau stream, both feeders of the Rám-ganga, which they join on the right bank, the one near Dúngari and the other at Budha-kedár. The principal villages are Airárho Bisht and Rájbar, Khadalgāon, Nail, Parthola, and Chachroti. The entire patti is highly cultivated and thickly studded with villages. The statistics of permanent value will be found under CHAUKOT MALLA. The higher portions of Chaukot are less fertile than the more central pattis, but are compensated by better climate and pasturage; and now that the border warfare with Garhwāl has ceased, cultivation has considerably extended; but there is still great room for expansion. Thirty-three villages were transferred from this to the Malla patti and 16 villages were received from it at the recent settlement. The patwári usually resides in Gumti, where there is a school.

Chaundkot, a parganah of the Garhwāl district, contains seven pattis or sub-divisions, each of which is separately noticed, *vis.*, Gorárayún, Jaintoleyún, Kingadigár, Maundárayún, Mawáleyún,

Pingala Pákha, and Bingwársyún. The assessment of the land-revenue at the various settlements was as follows :—

1815.	1816.	1817.	1820.	1823.	1828.	1832.	1840.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
2,222	2,603	2,909	3,270	3,881	3,981	4,052	4,065	7,445

At the recent settlement, there were 184 estates comprising 287 villages and containing a total area of assessable land, amounting to 11,461 acres, of which 10,580 acres were cultivated. The land revenue of 1861 amounted to Rs. 4,558, and the new assessment to Rs. 7,445, of which Rs. 309 were on account of alienated lands. The water-mill tax amounted to only Rs. 10. The land revenue falls on the total assessable area at Re. 0-10-4 per acre and on the cultivation at Re. 0-11-3 per acre. The population in 1841 amounted to 7,130 (3,281 females); in 1853, to 13,648 (6,782 females); in 1858, to 13,543 (6,617 females); in 1872, to 22,060 (11,207 females) and in 1881, to 23,403 (12,126 females). Chaundkot is bounded on the north by Báralsyún and Chandpur and on the south by the Salán parganahs. In many respects it resembles Kumaon, and is drained on the east by tributaries of the Rám-ganga and on the west by the Nyár. It is further noticeable for the almost entire absence of all forests, except towards the fort which gives its name to the parganah. The grain crops are remarkably abundant, but, except in the cold weather, when the people can proceed to the plains, there is no good market for the surplus produce near. The people have the reputation of being eminently litigious, and bear the character amongst the more simple Garhwáls of being almost as deceitful and cunning as the lowlanders. Clay slate, mica slate and limestone, with occasional granite are the prevailing rocks.

Churáni or Churánidhár, a village and encamping-ground on the Eastern Nyár river, in patti Iriyakot of parganah Malla Salán in Garhwál, lies on the route from Páori to Dháron, in latitude 29°-3'-42" and longitude 78°-56'-30", distant 12 miles 5 furlongs and 27 poles from Chamnáon, and 12 miles 2 furlongs 29 poles from the Mandhál river encamping-ground near Kartiya. The road from Chamnáon crosses the Machhlád river at Rájsara, 1 mile 3 furlongs 36 poles, and thence passes by the Silet rivulet up to Ubotdhár, and level to the Kamera rivulet, 1 mile 6 furlongs 11 poles, whence an ascent to Seriyadhár

of about 600 yards to the road leading to Rámnagar; from this, the road descends to the Kandoli rivulet, and, ascending to Deorari Devi, descends to the Kotai bridge, 1 mile 6 furlongs 2 poles. By Kandota and Ghandiyál, the ascent to the Kunjakhál is reached, and thence, a descent to Gadári, 3 miles 2 furlongs 36 poles. From the Gadári rivulet to the Kola and Pániya-khet rivalets, the road is tolerably level, 1 mile 4 furlongs 36 poles. Thence Siddhi-khál is reached, and an ascent of 800 yards, before the descent to the ford across the eastern Nyár, on each side of which there is an encamping-ground. The river is here 140 feet wide with a bed of stones and gravel. Churánidhár village lies on the left bank, about 1,020 yards from the river.

Chauthán, a patti of parganah Chandpur in British Garhwál, is bounded on the north and north-east by Lohba; on the west, by Choprakot, Dhaundyálsyún and Meldhár; and on the south and south-east, by Kumaon. This patti occupies the upper waters of the Binau, a tributary of the eastern Nyár. It was separated from Choprakot in 1864, and in 1870 lost one village by transfer to Choprakot. The patwári of Chauthán usually resides in Kapholgaon and collects the land-revenue of Meldhár and Dhaundyálsyún also; all three were assessed in 1864 at Rs. 2,506 for land-revenue and *sadábart* and Rs. 95 for *gúnth*, with a population of 5,405 souls. In 1884, there were 4,714 souls. The road from Almora by Ganái to Páori passes through the patti by the Búngidhár bungalow.

Chauthán, a patti of parganah Dhaniyakot in Kumaon, is bounded on the west by Kákalasaun Mulla; on the north by the same patti and Silaur Mulla and Malli Doti; on the east by Kosyán Malla; and on the south by Kosyán Talla and Uchakot. The road from Dwára to Rámnagar runs through the patti by Binkot and Mana. The principal villages are Binkot, Chyúni, Ghagreti, Siráni and Sunsyári. The assessable area comprises 1,874 *bais*, of which 337 are culturable and 1,537 are cultivated (139 irrigated). The assessment of land-revenue amounted to Rs 442 in 1815; in 1820 to Rs. 1,431; in 1843 to Rs. 1,580; and is now Rs. 2,223, which falls at the rate of Re. 1-3-0 per acre on the total assessable area and at Re. 1-7-2 per acre on the cultivation. The population at the time of settlement numbered 3,730 souls, of whom 1,922 were males. The villages are large and flourishing, though few in

number, and benefit by the pilgrim route and the Náini Tál, Ránikhet and Almora traffic. The patwári usually resides in Joshikhola in Ko-yán Malla.

Chawalthura, an encamping-ground in patti Bhábar (Páti Dún) of parganah Talla Salán in Garhwál, lies on the route between Kálú-Shahíd and Páori by the Jwálpa bridge over the Nyár river, and is situate in latitude $29^{\circ}-39'$ and longitude $78^{\circ}-46'-50''$: distant 9 miles 5 furlongs and 8 poles from Bogsárh bungalow in the Páti Dún valley; and 12 miles 4 furlongs 10 poles from the next stage north, Dugsún. The road from Chawalthúra to Dug ascends the Pilláni river, the eastern branch of the Paláin, to its confluence with the Haldgadi stream; by the left bank as far as Amsot, where it crosses to the right bank, 3 miles 2 furlongs. Thence still up the valley crossing the Khansor stream, a tributary falling into the Pilláni on the right bank, three miles on; it follows north-west the Khansor stream by Káliya under the Hathike-dánda range, Dhautiyál, and the Bánsagár rivulet (3 miles 2 furlongs 28 poles), crossing the stream several times. Here the hill road commences and a good road leads to Dugsundhár by an ascent of 2 miles 7 furlongs 22 poles.

Chhabís-Dumaula, a patti of parganah Dhyánirau in Kumaon, is bounded on the north by parganah Chhakbáta and patti Bisjyúla; on the west, by parganah Chhakbáta; on the south, by the Dhyánirau Bhábar; and on the east, by patti Chaugadh. Chhabís-Dumaula was separated from Malli Rau at the recent settlement. The assessable area comprises 1,188 *bísis*, of which 347 are culturable and 840 are cultivated (71 irrigated). The land-tax at the conquest amounted to Rs. 295, which rose to Rs. 320 in 1820 and Rs. 463 in 1843. It is now Rs. 1,067, which falls at Re. 0-14-4 per acre on the total assessable area and at Rs. 1-4-4 per acre on the cultivation. The population numbered at the last settlement 2,108 souls, of whom 1,108 were males. The patwári usually resides at Gágari. There is a school at Babyár.

Chhakbáta, a parganah of Kumaon, is bounded on the north by Dhaniya Kot, Mahryúri Palli, and Bisjyúla; on the west by Kota Malla; on the east by Chhabís-Dumaula and on the south by the Chhakbáta Bhabar. The total assessable area comprises 4,255 *bísis*, of which 1,551 are culturable and 2,703 are cultivated (487

irrigated). The assessment, in 1815, amounted to Rs. 1,519; in 1820, to Rs. 1,698; in 1843, to Rs. 2,204; and the current revenue is Rs. 4,082, which falls at Re. 0-15-4 per acre on the assessable area and Rs. 1-8-2 per acre on the assessable cultivation. Three hundred and forty-four *bhais* are held in fee-simple or free of revenue: one village was transferred to Bājyūla and four to Dhaniya Kot at the recent settlement. The population, at the time of settlement, numbered 7,107 souls, of whom 3,750 were males; in 1872, 7,122 males and 5,803 females and in 1881, 32,798 males and 23,953 females, the last figures include the lowland population of the Bhābar portion. The pargana comprises 51 mahāls or estates containing 81 villages. The patwāri resides at Silauti, where there is a school. The hill portions of Chhakhāta and Kota overhang the Bhābar and, with the exception of the north-western extremity of Kota, cover the southern or plainsward slope of the Gāgar range from the Gaula on the east to the Kosi on the west. The upper villages of both, accordingly, partake of the ordinary mountain character, the lower of the climate and productiveness of the Bhābar. Chhakhāta is said to be derived from *khat* (6), *khashī* (60) and *khat* (lake), or the sixty-six lakes. It occupies the whole basin of the Gaula. The Naini Tāl lake forms the source of the Baliya branch of the Gaula river and Malwa Tāl, the source of another branch. The Naukuchiya and Bhīm lakes each send forth a stream to the Gaula and the collection of lakes and pools known as the Sāt Tāl send their surplus waters to the Baliya. It is said that Nala and Damāyanti, the hero and heroine of the celebrated story in the Mahābhārat a bearing their name, came during their exile to the pools called after them near Bhīm Tāl, and that when Damāyanti took up the fish from the lake prepared for cooking, the touch of her divine fingers restored them to life, and they were accordingly committed again to the lake. The fish of Bhīm Tāl are noted for their broad flat heads and truncated tails, which appear as if the ends had been cut off. Hence the local proverb used when a good arrangement has been made and comes to nought:—

'Jab dpattia unekhya, kātiya māchha tāl jāni.'

'When misfortune comes, cut up fish go back to the lake.'

The central plateau, near Bhīm Tāl, contains one of the finest sheets of cultivation in the hills. As observed by Mr. Batten:—

"On the whole, the inhabitants of Chhakháta are a prosperous race, and amongst them the clans Mahura and Saun-Bisht, who first ventured to push their cultivation beyond the Barakheri pass into the Bhábar (carrying with them to their clearing the name of their hill parganah), are, under the present secure Government, reaping the fruits of their enterprise and are gradually increasing in wealth, retarded somewhat in the case of the Mahuras by their family quarrels and divisions. The people present a contrast to their neighbours in Phaldákot, in being singularly averse to the labour of carrying loads, however profitable. They themselves account for this feeling by saying that their agricultural toils involving, besides their hill tillage, the sowing and reaping of a crop (and sometimes two) in the hot Bhábar, quite incapacitate them for physical exertions of the kind. The Kota people in a less degree affect the same distaste." Under these circumstances the voluntary coolies necessary for Naini Tál are rarely, if ever, natives of the immediate neighbourhood.

Ohhirha, a halting-place and traveller's bungalow on the road from Lohaghát to Pithoragarh, distant 10 miles from the former and 17 miles from the latter, in patti Regarúbán of Káli Kumaun. There is a baniya's shop, but no servants at the bungalow.

Chobta, or Chaupatta, a halting-place on the route between Mandal and Ukhimath from Nandprayág, is situate in patti Parkandi of parganah Nágpur in British Garhwál, in latitude $30^{\circ}29'$ and longitude $79^{\circ}14'-30''$. It consists merely of a collection of huts in a glade of the forest, and is distant 10 miles 2 furlongs 23 poles from Ukhimath and 11 miles 1 furlong 25 poles from Gopeswar. The road from Gopeswar is undulating as far as Mandal, thence there is a long and tolerably steep ascent for about 7 miles to Chobta. From the Pángarbáaa dharmasálas (about half way) towards the north-east there is a fine view of a snowy peak and its subordinate ranges. Further on, the road passes by Bhímudiya, beneath the cliffs forming the southern side of the Chandrasila peak (12,071 feet), on which is the temple of Tunganáth. From Chobta, there is a perfect view of the line of hills lying above the route to Kedárnáth and of the Kedárnáth and Chaukhamba peaks themselves, as well as of the summits of the Badrináth peaks. The peaks of Kedárnáth seem to be precipices almost perpendicular.

no snow finding a resting-place on their grey sides. The Chaukhamba peak appears like the crater of an extinct volcano with walls still standing and hollow inside ; that facing the south is the smallest and lowest. Diuri Tál is distant from here about seven miles, and the summit of Chandrasila between three and four miles.

Ohoprakot, a patti of parganah Chandpur in British Garhwál, is bounded on the north by Bidolsyún, Kandársyún, and Dháijyáli ; on the west, by Ghurdarayun ; on the south, by Bangársyún and Dhaundyálsyún, and on the east, by patti Lohba. Six villages of this patti were transferred to patti Kandársyún in 1864. The patwári of this patti usually resides in Kanyúr and collects the land revenue of Dháijyáli and Bangársyún also, aggregating in 1864, for land revenue and *saddábat*, Rs. 2,569 and for *gústh* Rs. 20, with a population of 5,955 souls : in 1881 there were 7,375 souls. The patti contains the upper valley of the Kál-gadh, a tributary of the eastern Nyár and the sources of the latter stream.

Dába, a mart in Hundes, in the Punkag of Kyungbuchya and province of Nári, is situate in north latitude $31^{\circ}-13'-50''$ and east longitude $79^{\circ}-58'-50''$, at an elevation of 14,000 feet above the level of the sea. It comprises a small collection of mud and stone huts, which in the summer are increased by the tents of the Huniya and Bhotiya traders from Níti and Milam. The stages from the Balchhadhúra pass beyond Milam are Jánkáng, Kanchego, Dákhar, Shokong, Manum, Shikyak, Dongpu, and Dába. The Zungpun of Dába has charge of the Níti and Jubár passes.

Dabka, or Dubka, a stream rising on the southern declivity of the Gágar range south of patts Uchakot and Dhaniyakot and forming, during the upper part of its course, the boundary between Malla and Talla Kota in Kumaon, has its sources in north latitude $29^{\circ}-30'$ and east longitude $79^{\circ}-22'$. The Gágar range here rises to 8,408 feet in Badhán-dhúra, 8,244 feet in an intermediate peak, and 8,612 feet in Sonchuliya, the most easterly of the three. The Dabka holds a south-westerly course for about twenty miles to the village of Baruwa-dáng, where it finally passes from the mountains by the Baruwa peak (1,309 feet). In this part of its course, it crosses the Kota Dun by Ukali, Rámdatta, Dohaniya, and Debi-Rámpur, whence it crosses the low hills, representing the Siwálíks here, receiving on the right bank the Khucharhi torrent. The Dabka is

here everywhere fordable, except after heavy and continued rain, and then only for a few hours; but in the Kota Dún it is frequently impassable after a heavy downfall, and the size and number of the boulders in its bed there confirm what the people say of it, that it is a good servant, but a bad master. Its name, too, from '*dubna*,' 'to overwhelm,' confirms this statement. From Baruwa-dáng, it is known for a short distance as the Gatiya, then as the Gúghi, and lower down as the Nihál, when, after a course of about ninety miles, it joins the western Rámghanga on the left bank. The Dabka is crossed by the road from Morádabad to Káladhúngi.

Dalmisain, a village and halting-place on the road between Páori and Kotdwára, is situate in latitude $29^{\circ}50'-1''$ and longitude $78^{\circ}38'-12''$ in patti Talla Silá of parganah Talla Salán in British Garhwál, distant 10 miles 6 furlongs and 33 poles from Gúín-páni, the previous stage, or 13 miles 4 furlongs 20 poles from Barsúri and 9 miles 6 furlongs 33 poles from Kotdwára. The road hence to Kotdwára follows the valley of the Koh or Khoh river, along the left bank, passing the Do-gadh rivulet by a bridge near the junction with the road from Kotdwára to patti Taláin and Khátali, 1 mile 3 furlongs 36 poles; thence to Dúrga-devi slightly undulating, and the latter part of the road along bad precipices, 1 mile 7 furlongs 16 poles to Amsaurh and Makhi bbel, 2 miles 6 furlongs, from which it is 3 miles 5 furlongs 21 poles along a tolerably level road to Kotdwára.

Dánpur, a parganah of Kumaon, comprises eight patts, each of which is noticed separately, *viz.*, Dánpur Malla, Bichhla and Talla, Dúg; Katyúr Malla, Bichhla and Talla, and Nákúri. The assessment of the land-revenue at the different settlements was as follows:—

1815.	1817.	1818.	1820.	1823.	1828.	1832.	1842.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
3,583	3,966	4,250	4,613	6,746	5,853	5,958	5,920	15,262

The incidence of the present land tax is Rs. 0-12-11 per acre on the entire assessable area, and Rs. 1-9-1 per acre on the cultivation. The assessable area comprises 19,019 *bís*, of which 9,210 are culturable, and 9,809 are cultivated (8,976 irrigated). One thousand three hundred and sixty *bís* are held as *gúnth* and 287 free of revenue. There are 316 maháls or estates comprising 517

villages, inhabited by 10,097 males and 8,769 females. In 1872, the population numbered 23,339 souls, of whom 11,094 were females; and in 1881, there were 17,817 males and 15,607 females. Batten's remarks on this parganah are applicable, for the most part, at the present day :—

“ At the base and from the spur of Nandadevi and its neighbour Nandakot rise the three rivers which give a character to the parganah and separate its eastern part into three great valleys, viz., those of the Pinder, the Sarju, and the eastern Rámanga, while its western half is drained by the Gomati and its affluents, uniting with the Sarju at Bágeswar. This last-named place, and the ruins of the most ancient seat of hill power at Baijnáth, render the western division, or Malla and Talla Katyúr, locally illustrious; made still more so by tradition that when the years of sanctity for Hardwar and the Ganges shall have been accomplished, the river virtue will be transferred to the Sárda, and be found chiefly glorified on the Sarju at Bágeswar. The agricultural prosperity of Dánpur and Katyúr is not great; where the soil is best, and where facilities for irrigation abound, there, unhappily (as for instance in the hot glen of the Sarju), the climate is inimical to the increase of population, and the exceeding heaviness of the jungle tends to perpetuate the animal scourges of the hills. The state of Katyúr has improved in the lower patti of which at and towards Bágeswar the cultivation has increased, and the climate has proportionately improved; and in the upper patti of which, where it has been always most difficult to understand the causes of unhealthiness, a visible addition to the land under tillage and some restoration of inhabitants to deserted spots have occurred. Still the broad valleys of the Garura and Gomati at nearly 4,000 feet above the sea are as yet incompletely occupied.

At one time, too from the citadel of Ranehún, above their capital Katyúr, the ancient rulers of the hills must have looked down and around on an almost unbroken picture of agricultural wealth, for, not only in the valleys, but up three-fourths of the mountain sides, now covered with enormous forests of pine (especially in the west and south-west towards Gopálkot and the other great fountain-heads of the Garura and Koar) the well built walls of fields remain in multitudinous array, terrace upon terrace, a monument of former industry and populousness, and only requiring the axe to prepare an immediate way for the plough. The valley of Baijnáth, being situate on the frontier of Kumaon with Garhwál, and in the neighbourhood of Badhán fort, was often in all probability the scene of border conflicts and military exactions; and the desertion of villages once having commenced, and no means of restoring the population being at hand, the deterioration of climate, originating in the spread of rank vegetation and the neglect of drainage may be supposed to have gone on from bad to worse till finally the heat and moisture rendered it what it was in the earlier days of our rule, the most backward, unhealthy, and jungly portion of the district. The opening up of tea plantations and the increase of cultivation has done much to improve the character of the climate.”

“ The Dánpur patti was first divided into Upper and Lower Dánpur at the second triennial settlement on account of the great diversity in the situation

and climate, and consequently in the agricultural produce and the customs of its inhabitants. In the Upper patti, *pháphar* and other coarse grains are alone possible in the rains; whilst in the spring, the produce differs in no respect, except fertility, from the rest of the province. Its inhabitants are remarkable for their industry, and derive considerable profits from the manufacture of blankets, mats, baskets, and the rearing of goats and sheep for the Bhotiya trade, on all of which there was a tax, now remitted. In the old Chand records the area of Upper Dánpur was entered in *kárhkas*, *máshas* and *ratís*, and in the Gorkhálí books in *jyálas*. In Lower Dánpur, a large increase in revenue was obtained by the bringing on the rent-roll small villages which had been reclaimed, and were then discovered for the first time. The people of Dánpur declare themselves to be descendants of the Dánavas of mythology, just as the people of Kálí Kumáon declare that they are of Dáitya origin. The oldest inhabitants were a tribe of Khasiyas called Wohiliya, of whom no traces now remain. The Dánpuris are considered to be of a lower class by the other hill people further south, and they are certainly alone in the worship of the deified Khasiyas, Lál Dána, Dharm Sinha, Dána, and Bír Sinha Dána. They have numbers of quaint legends of their own. Thus they say that the Kawa-lekh, a snowy peak above the Sunder-dhúaga, is the paradise of crows, who all seek to die there; and if they die elsewhere, some crow brings a feather of the dead one and deposits it with the rest. Another local legend is related to explain why a bear is held to be as wise as a woman: in former days a woman dressed in white killed her husband and was expelled from society, when she became a bear, and the whiteness of the bear's breast represents the white clothes worn by the woman."

Dánpur Malla, a patti of parganah Dánpur of Kumáon, is bounded on the south by Talla and Bichhla Dánpur; on the west, by parganah Badhán of Garhwál; on the east, by Bichhla Dánpur and Malla Juhár; and on the north, by the peaks of Nanda Devi and Nandakot. The road from Almora to Milam branches off at the southern boundary to the east, and the road to the Pindari glacier runs straight north. The statistics of the Malla, Bichhla and Talla pattis may be shown thus:—

Dánpur.	ASSESSABLE AREA IN BISDIS.				ASSESSMENT IN RUPEES.				POPULATION.	
	Total.	Cultivated.		Culturable.	1915.	1920.	1943.	Current.	Males.	Females.
		Irrigat- ed.	Dry.							
Malla ..	2,623	156	1,039	1,125	1,320	1,290	1,351	1,714	2,021	1,661
Bichhla ..	1,742	347	415	979	517	484	519	1,341	910	526
Talla ..	2,793	653	594	1,544	347	555	632	2,064	1,376	1,192

The assessment on the cultivated acre falls at Rs. 1-0-11 in the Malla patti, at Rs. 1-12-2 in the Bichhla patti, and at Rs. 1-10-5 in the Talla patti. The principal villages are Banro, Chaurh, Dhokuti, Dubárh, Súpi, and Sorúg. Twelve villages were transferred to the Talla patti, which also received 10 from Katyúr Malla at the recent settlement, and gave over eight to Dúg and one to Kamsyár. The patwári usually resides at Lwárhket; there is a school at Pharsáli. There are iron mines at Karmi in the Malla patti and at Jagthána in the Talla patti.

Dánpur Bichhla, a patti of parganah Dánpur in Kumaon, is bounded on the north and west by Dánpur Malla; on the east by Tallades, and on the south by Dánpur Talla, Nákúri, and Pungaráon. This patti was separated from Malla Dánpur at the recent settlement. The statistics are given under DÁNPUR MALLA. The principal villages are Bhandár, Liti, Naukorhi, and Barhet. Two villages were received from Pungaráon at the recent settlement. The patwári resides at Liti, where there is a school.

Dánpur Talla, a patti of parganah Dánpur in Kumaon, is bounded on the north by Garhwál and Malla Dánpur; on the west by Malla and Talla Katyúr; on the south by Talla Katyúr, Dúg, and Nákúri; and on the east by Nákúri and Bichhla Dánpur. The Sarju flows through it from north to south-west, to a little below its confluence with the Kanálgár. The road to Milam lies along the right bank of the Sarju up to Kapkot, where the patwári resides. There is a school at Silgani. Other important villages are Bairha-Majhera, Harsil, Mallades, and the Photing villages above Kapkot on the right bank of the Sarju. The Nákúri temple lies to the east of the Hagdámi peak (7,083 feet) near Udiyár. The Tapalpain peak, on the southern boundary and same side of the Sarju, attains a height of 6,752 feet. To the west of Photing, on the right bank, Jakhári rises to 7,815 feet and Chirpatkot on the boundary of Malla Dánpur and close to the river rises to 6,687 feet. The Kanálgár, rising in the Jagtana peak and flowing first south-west under the name of the Daurágár around the northern face of the Chunár peak (6,156 feet), then turns south-east between it and the Bor peak (6,652 feet) and passing by several small villages falls into the Sarju on its right bank a few miles above Bágéswar. Samati on the Paunsagadh, a tributary of the Kanál,

is in this patti. Portions of Talla Katyúr were transferred to this patti at the recent settlement, and portions of this patti were added to the new pattis of Dúg and Nákúrí (for statistics see *DANPUR MALLA*).

Darma, a parganah in Kumaun, comprises four pattis, viz., Dárma Malla and Talla, Byáns, and Chaudáns. The history of the assessments shows the following results:—

1815.	1817.	1818.	1820.	1823.	1828.	1833.	1843.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
4,518	5,766	4,530	1,225	1,345	1,368	1,405	1,400	1,886

The land tax now falls at Rs. 0-12-5 per acre on the total assessable area and at Rs. 1-1-1 per acre on the cultivation. The whole area liable to land revenue amounts to 2,347 *bists*, of which 639 are culturable and 1,107 are cultivated (271 irrigated). There are only 37 maháls or estates comprising 43 villages and supporting a population of 4,701 souls, of whom 2,138 are females. Forty-seven *bists* are held free of revenue. Dárma proper is now divided into two pattis or sub-divisions: the Malla or upper and the Talla or lower, of which the statistics have been given. The upper patti occupies the valley of the Lissar river and the upper part of the Dhauli; the lower patti lying near the junction of the latter with the Káli. (See article *BHOTIYA MAHÁLS*.) The patwári resides at Khela Syálápanth.

Dárma Yáukti, a stream, rises on the northern slope of the Lunpiya-dhúra pass into Tibet from patti Byáns in Kumaon, near the *larcha* or *dakhna*, as the foot of the pass is called. The stream here winds quietly through a flat bed, a furlong wide, well strewn with fragments of broken stone. The road hence to Rákas Tál lies along the bed of the stream for some distance, and then along the right bank. Two or three miles further down, at the point where the river turns northward by east, the left bank assumes the straight and regular form, which is characteristic of the ravines to the north, in the Himálaya in this part of Húndes: it resembles a huge artificial dyke running for several miles in a straight line, in a steep slope, which at this end is perhaps 500 feet in vertical height. The name is supposed to be derived from the stream having its origin in the Dárma párganah. Below the *larcha*, the stream is joined by the Silangtar, from the eastward, in a bed of great width and depth,

through a considerable opening in the mountains. Beyond Bhá-witi the view on the road to the west is bounded by the high bank of the Dárma-Yáukti, which to the northward, however, gradually subsides into the lower plain. Further northward it receives another stream, the Gúnda-Yáukti, rising in Dárma, after which the united river takes the name of Chú-gár or Chú-gárh, and lower down receives another tributary that springs from high ground near Ligcheph, a day south of Kyunglung on the Chirchun road. It then runs parallel to the course of the Satlaj, but in an opposite direction : hence the name here of Biphu-kula; '*Biphu*' signifying "contrary." Before becoming the Chúgár, the Biphukula receives the Chúnagu, 'a stream of Dárma' rising a few miles west of the Gúnda-Yáukti. The Chúgár joins the Tirthapuri branch of the Satlaj between Kyunglung and Tirthapuri [H. Strachey J. A. S. Ben. XVII. (2), 98.]

Dárán, a patti of parganah Chaugarkha in Knmaon, is formed from the old patti of that name and part of Lakhanpur. It is bounded on the north, by Ríthágár and the Sarju river, which separates it from Athgaon of Gangoli; on the west, by Ríthágár, Lakhanpur Talla and Malla; on the south, by patti Rangor; and on the east, by patti Bel of Gangoli. It is drained by the Alaknandi river, a tributary of the Sarju, which joins it on the left bank and further south by the Bhaur-gadh, a tributary of the same river separating it from Rangor. The road to Pithoragarh passes through this patti to the east by the Jageswar temple and Naini bungalow (*q.v.*) The total assessable area comprises 3,082 *báts*, of which 1,311 are culturable and 1,770 are cultivated (15 irrigated). The assessment in 1815 amounted to Rs. 316; in 1820, to Rs. 603; in 1843, to Rs. 854, and the current assessment is Rs. 1,474, which falls on the total assessable area at Re. 0-7-8 per acre and on the cultivation at Re. 0-13-4 per acre. Two hundred and fourteen *báts* are excluded from the revenue-paying area as *gúnth* and waste. The population at the time of settlement numbered 3,688 souls, of whom 2,058 were males. Sixteen villages were received from Lakhanpur and twenty from Rangor at the recent settlement. The patwári usually resides at Naini : there are schools at Phaltiya and Jageswar.

Dasoli Malli, a patti of parganah Dasoli in British Garhwál, is bounded on the north, by Painkhanda Talla and Talla Dasoli; no

the south, by the Nandákini river ; on the west, by Talla Dasoli ; and on the east, by Nandák. The principal villages to the west are Jákhiñi, Khunána, Chañtoli, and Nágbagar in the Nandákini valley connected by a cross path with the Baijnáth and Nandprayág road near Kándai in the Talli patti. The copper mines at Bonga, Pitkúnda, Bagota-Hina, Charbang, Danyála, Ghutgár, Suári, and Sanlabagar in parganañ Dasoli are now waste. At the current settlement, in 1864, the two Dasoli pattis and Band comprised 102 estates containing 142 villages with a total assessable area of 4,918 acres, of which 3,367 were cultivated. The land revenue amounted to Rs. 3,313, of which Rs. 2,155 were alienated in *sadábart* and the remainder in *gúñth* and *muáft*. The mill-tax yielded Rs. 229 and the land revenue fell at Re. 0-10-9 on the total assessable area and at Re. 0-15-9 on the cultivation. The population returns in 1841 gave 3,261 souls (1,385 females) ; in 1853, 7,106 (3,573 females) ; in 1858, 7,063 (3,467 females) ; in 1872, 12,523 (6,221 females) and in 1881, 10,043 (5,028 females). The patwári of Nandák, resident at Pharkhet, collects the land revenue of Dasoli Malli.

Dasoli Talli, a patti of parganañ Dasoli in British Garhwál, is bounded on the north and west by the Alaknanda river ; on the east by Dasoli Malli ; and on the south by Nandák and the Pindar river. The Birah-ganga, running west, joins the Alaknanda on the left bank near Birahi in this patti, in latitude 30°-22' and longitude 79°-45' ; and further south, the Nandákini flowing in the same direction joins it at Nandprayág, in latitude 30°-19'-45" and longitude 79°-21'-55". The connecting ridges and spurs of the Kotidánda (10,071 feet), Kotadánda, (8,323), Deangan (10,444), and Airadhár (10,354) peaks form the water-parting between the two rivers. To the north of the Birah-ganga, the Kakrondhar peak attains a height of 5,682 feet ; and further east is the Dhangmalkund peak, 8,120 feet. With such lofty mountains, cultivation is mostly confined to the river valleys. The road from Karnprayág through Nandprayág to Badrináth passes in a north-easterly direction along the left bank of the Alaknanda, while the road from Baijnáth and Almora in Kumaon passes down the Nandákini river to Nandprayág. The patwári of this patti, resident at Nandprayág, collects the revenue of Band also, which in 1864 aggregated from all

sources for both pattis Rs. 2,628, of which Rs. 1,062 were from *gúnth* and revenue-free lands and the remainder *sadabart*.

Dehra, a municipality and chief town of the Dehra Dún district, is situate in north latitude 30°-19' and east longitude 78°-5', at an elevation of 2,300 feet above the level of the sea. The office of the Great Trigonometrical Survey is 2,323 feet. Dehra lies on the road connecting Mussoorie with the plains, and is distant 42 miles from Saháranpur, the same from Rúrki, 14 miles from Mussoorie and 7 miles from Rájpur. The road to Saháranpur is by the Mohand pass, raised, bridged, and metalled throughout. A good second-class road, raised and bridged and for a short distance metalled, connects with the Jumna on the west; and a third class road proceeds through the eastern Dún to Hardwár on the east. In 1827, Dehra contained 518 houses and a population of 2,126 souls. In 1881, the population numbered 20,683 souls (8,442 females), of whom 15,063 (6,006 females) were Hindús, 4,881 (1,949 females) were Musalmáns, and 739 (487 females) were Christians. The number of inhabited houses was 3,959. The occupations of the people are those of an ordinary Indian town, and may be shown (for those followed by more than forty persons) thus:—Brokers, 46; carpenters, 148; gardeners, 167; cooks, 172; cloth-sellers, 78; butchers, 66; beggars, 157; water-carriers, 118; labourers, 174; shop-keepers, 232; pensioners, 74; druggists 42; peons, 123; watchmen, 63; sweepers, 271; tailors, 265; milkmen, 43; washermen, 149; palanquin-bearers, 47; grooms, 256; masons, 164; goldsmiths, 70; cultivators, 365; potters, 75; greengrocers, 99; cartmen, 192; grass-cutters, 250; wood-cutters, 143; blacksmiths, 49; day labourers, 738; office clerks, 103; and servants, 117. The native town¹ lies to the east and west of the principal road from Mohand to Rájpur, and is surrounded by hamlets practically forming a portion of the town of Dehra, but of which some are, and some are not, included within municipal limits. Such are Dharmpur, Chukwála and Háthi-barkhála; near the Hardwár, Jumna, and Rájpur roads respectively, and which are not within municipal limits, and Dilarám-ki-bázár, Karnpur, and Dálanwála, included within municipal limits. The central portion of the town is built on the crest of a low ridge, which

¹ I am indebted to Mr. Fisher, B.C.S., for this notice.

extends from the Mohand pass to Rájpur, and forms the water-parting between the Ganges and the Jumna. In the early accounts, Dehra is described as situate amid dense groves of mango-trees, surrounded by verdure-clad fields, the vicinity being watered by a torrent descending from the mountain. Seen from Mussooree, the country around Dehra appears to be well-wooded, especially at the southern extremity of the town, where the grove, called Lakhibágh, affords a good encamping-ground. From an early time, the drinking-water of Dehra has been supplied by an aqueduct drawn from the head of the Rísipana torrent near Rájpur. In 1841-44, this was repaired and restored, and designated the Rájpur canal. Divided into two, it intersects the civil station and Dehra, and forms one of the most characteristic features of the place. Although it may be charged with being the cause of malaria in some cases, there is no doubt of its being the cause of the verdure which makes Dehra at all times one of the prettiest stations in India.

The canal, too, has helped to rear the magnificent bambus which, in fine clumps of several yards in circuit, are still to be seen along the road. These perished to a great extent in 1881, after flowering. Mr. Duthie records this phenomenon, and writes:—

Bambus.

“Among the remedies which have been suggested for keeping them alive under these circumstances is one known very well to natives and said to have been successful. As soon as the flowers begin to appear, all the stems are cut down close to the ground, after which the roots are covered over with manure and litter and set fire to. When the rainy season comes on, it is said that an abundant crop of young shoots will break out from the old roots. It is not difficult to understand the cause of death under ordinary circumstances when we consider how the plants must be weakened by the sudden production of such an enormous mass of flowers; and at the same time, being almost devoid of leaves, the plants are thereby deprived of the means of obtaining their proper nourishment by the action of the roots. The effect of fire being applied may possibly be to seal up the points from which the remaining strength or sap of the plant was issuing, and to cause it to be stored up just as nature does in the case of bulbs, tubers, and other fleshy underground organs, and which under suitable conditions are capable of perpetuating the plant.”

The civil station extends along the Rájpur road, from the northern extremity of the native town to the Body-guard lines which are about midway between Dehra and Rájpur. There are a few other houses near the

Civil station.

race-course and towards cantonments. The fine open space between the latter and the civil station was the old parade-ground used by the troops stationed at Dehra, until the lines were removed to the higher ground across the Bindhlál stream. The race-course belongs to the municipality, and is one of the finest in India, and makes the Dehra week in October rank amongst the most successful meets. The site of the new cantonments, occupied by the 2nd Gurkhas or Sirmor Battalion, is regarded as the healthiest part of Dehra, and lies about two miles from the town on the right of the Jumna road.

Cantonments.

A new road branches off from the Rájpur road near the Dilárám-kí-bázár to cantonments, called the Háthibarkhála¹ road, which shortens the distance to Rájpur. The comparative elevation of the lines gives a drier site, and there is nothing to obstruct the air from the hills in the way of forest, so that the climate of cantonments is perceptibly better than that of Dehra civil station, with its luxuriant vegetation and damp soil. The irrigation cut from the western canal passes through cantonments, and, although unfit for drinking purposes, is used for irrigation. A fine rifle-range has been made near the quarter-guard, and, to the right, the lines with a bazaar and hospital at no great distance. The private houses are mostly owned by the officers of the regiment quartered here. The suburbs of both cantonments and the civil station contain numerous tea-gardens.

The Viceroy's body-guard has its head-quarters at Dehra, the lines being situate about half-way between Dehra and Rájpur. The

Viceroy's stables, with accommodation for some fifty horses, are situate near the race-

course. The body-guard arrives at Dehra at the end of March and leaves for Calcutta at the end of October. The Sirmor battalion, now known as the 2nd Gurkhas, was formed, in 1815, from the disbanded Nepálese troops, and was first stationed at Náhan, the chief town of Sirmor. It was directed to join the force assembled at Sitapur in Oudh and destined to invade Nepál, but had only reached Murádabad when the order was countermanded, and

¹ The name Háthibarkhála has its origin in a tradition to the effect that there was here a great *bar* tree (*Ficus indica*), which had an opening between its trunks through which an elephant tried to pass, and in doing so rent the tree as under, whence the name of the village, *khála* being 'a pass' in Híndí.

it returned to Dehra, which had been selected as its future cantonment.¹ It was again on service at Sitapur and in October, 1817, served under Sir David Ochterlony in the Mahrátha campaign. In 1824, it assisted in clearing the Siwálíks of the Gújar banditti,² and in 1825-26 two companies served at the siege and capture of Bhartpur. In 1846, the regiment reached Ludhiána in time to save it from plunder by the Sikhs, and was present at Aliwal and Sohraon. In 1848, it was again on service at Ludhiána, and remained there until the end of the second Sikh war. In 1850, it became a general service corps, and, in 1857, was the first in the field against the rebels, where its services at Badli-ke-sarái and as the main picquet at Hindu Rao's house cannot easily be forgotten, losing as it did 327 killed and wounded out of 490 of all grades. The regiment³ became known as the Sirmor rifle regiment for this service. In 1864, it served in the Momand war; in 1868, in the Hazára expedition; in 1870, in the Lushái expedition; and, in 1876, was honored in having His Royal Highness Field Marshal, the Prince of Wales, as its honorary colonel, and the name was changed to "the Prince of Wales' Own." In 1878, the regiment formed a portion of the Malta and Cyprus expedition, and proceeded thence to Afghánistán, joining in the march from Kábul to Kandahár, and being present at the battle of Kandahár in September, 1880. This record of services is surpassed by no other regiment, and Dehra does well to be proud of its popular local regiment.

Turning to Dehra itself, the municipality divides it into 27 muhallas or wards, viz., Akhára; Paltanbázár; Mannuganj; Parsauliwála; Talla muhalla; Bázár, Jawáhir mistri; Játiya, near Kharbara; Játiya, near Aragarh; Chukwála; Darshani-darwáza; Bázár Diláram; Bázár Dhámuwála; Dhámuwála; Dálanwála; Salawála; Pháltu-line; Karanpur; Kua-muhalla; Kunihárwála; Korsi-muhalla; Kharbara; Ghosi-muhalla; Lakhi-bágh; Luniya-muhalla; Mánsinghwála; Náyanagar police lines and Náyanagar. Most of these names explain their origin from some person or place connected

¹ When formed there were 10 companies of one subahdár, four jamadars, eight havildars, two buglers, and 120 sepoy each. This was reduced in 1818 to eight companies of 80 men each. ² See Williams' Memoir, p. 145. ³ It also received an extra color bearing the word "Dehli" in English, Urdu, and Hindi, similar to those of British line regiments.

with them. The Darshani-darwāza is one of the gates of the Sikh temple from which a view of the tomb of the "*guru*" is obtained. Kharbara is said to mark the place where, in a fight between the Pándavas and Kauravas, a cow was accidentally wounded in the hoof (*khar*) by an arrow : or, according to others, where the cow Kámadhenu planted her hoof, and three springs broke out, which now fill the tank excavated by Panjáb Kuar. The chief public offices are the session court-house; the offices of the Great Trigonometrical Survey; the tahsili; post-office; telegraph-office; police-station; dispensary; sarái, and leper asylum. The club, the American Mission schools, Convent school, and three Government schools end the list. The club was started in 1878, and now has a convenient house and some resident members. There are two hotels—Gee's hotel and the Victoria, which is badly situated. The American anglo-vernacular boys' school dates from 1854, when Mr. Colvin gave a portion of the tahsli compound for the use of the mission, which was exchanged for a better site by Mr. Dunlop. In 1881, there were 137 pupils, of whom 110 were Hindus, 15 were Musalmáns, and 12 were Christians. In 1884 there were 162 boys on the rolls. A native Christian school for girls was opened in 1859 by the Reverend D Herron and supplies a long-felt want. In 1881, there were 134 boarders and eight day-pupils, and in 1884, there were 140 on the rolls. A fine building has recently been erected to accommodate teachers and pupils. "Education in its highest form is aimed at, but the importance attached to the domestic arts gives it a more definite and practical aim." The teaching is intended to include the entrance university course. The pupils come from all parts of the North-Western Provinces and the Panjáb, and the moderate charge of six rupees per mensem for board and tuition place it within the means of all. Another Christian institution is the Ludhiána orphanage established there in 1836 and removed to Dehra in 1871. Mr Wood's academy and the Convent schools come down to Dehra from Mussooree in the winter. The convent was established in 1845, and has 100 pupils and from eleven to fourteen religious ladies in residence. The winter headquarters of the Great Trigonometrical Survey are here. Its records date from 1800, when it began in Madras, and its operations now include India and the neighbouring countries, A fghánistán and

Tibet.¹ The maps produced at Dehra are photozincographed in Calcutta, where the results obtained under the superintendence of Major Waterhouse are unsurpassed in any country for accuracy and finish. There is a church and Roman Catholic and Presbyterian chapels.

“The climate of Dehra may be termed,” writes Dr. McLaren, “a moist and temperate one. The average rainfall is 78 inches. The temperature in shade fluctuates from 37° in January to 98° in June and the daily range is not great, if we except the months of September and October, which form consequently the most unhealthy season of the year. The valley, on the whole, is peculiarly free from sudden extremes of heat and cold, especially from the blasts that scorch the country lying below its southern boundary, but owing to the cutting, clearing, and cultivating operations which have within the last few years been carried on, in the western portion of the Dún, hot winds now accompany the advent of the summer months. These are not scorching in their effects, but are annually becoming more marked and prolonged, and are doubtless owing to the rapid clearances of tree jungle which the landowners think fit to carry out. These warm breezes were unknown in Dehra before 1873. From its close proximity to the outer Himálayan range, Dehra is also generally cool: the cold weather commencing earlier and lasting longer than in the plains. There are no special prevailing winds: a mild breeze during the warmer months being, during the day, wafted from the south, which changes its direction from the north after sunset, thus rendering the climate at this sultry season tolerable and pleasant. The water-supply of the European portion of the station is obtained from a spring² at Nalapáni, which issues from a small hill situated about two miles to the north-east. The present supply of drinking water for the native population is obtained from an open canal which traverses by numerous channels the city, being liable, however, to contamination of all kinds during every

¹ Records, G. T. Survey, Vol. II., Dehra, 1870. ² A scheme for bringing this water into the town in pipes has often been before the municipality. The cost of a cheap scheme by which the water could have been brought to a tank on the old parade-ground near the town is stated at Rs. 18,000, but the apathy of the people themselves, the paucity of wealthy men, and the poverty of the municipal funds have hitherto presented insuperable obstacles to progress in this direction.

season of the year. During the rainy season especially, its quality is so bad that it is totally unfit for use, in fact it is very injurious, as shown by the general prevalence at that season of bowel-complaints, which constitute the chief causes of the local diseases. Tanks have lately been constructed at various points throughout the city to allow of the subsidence of matters held in suspension; but so minutely divided are the suspended clay and sand, that nothing but boiling and filtering the water can render it fit for drinking purposes. In the station, there is only one well in use, and it is 226 feet deep. It is kept more especially for jail use, but the quality of its water, too, is so inferior and has been such a frequent source of bowel ailments amongst the prisoners and others, that boiling and filtering have to be resorted to before it, also, is fit to use.

“Dehra being built on the watershed of the Dún, and the subsoil being composed of loose gravel, the drainage of the station and its suburbs is most perfect. The death-rate for the municipality in 1880 was only 18·97 per thousand, and compared favourably with that of most others, the provincial average being 37·37. There is a second class sudder dispensary at Dehra, situated about the centre of the bázár to the right of the main road leading from Saháranpur to Rájpur. It was first opened in 1852, and is supported partly by Government and partly by private and municipal contributions. Till very lately, there were two branch dispensaries in connection with it—one at Rájpur and another at Kálsi, both now abolished. This dispensary has six wards affording accommodation to 20 males and 8 females, besides one which is kept exclusively for the better class of natives. The diseases ordinarily treated are malarial fevers, goitre, skin diseases and dysentery, respiratory affections, rheumatism, ophthalmia, diarrhoea, and diseases of the generative organs. The average daily attendance is in-patients 28, out-patients 87, and the number of inmates, including the hospital assistant and servants, 35 : total number of out-patients in the year (1881) 15,738, in-patients 668. The average annual income, including Government grant, is Rs. 2,400, and the expenditure Rs. 2,300. Vaccination is carried on, throughout the district, by a special officer of that department.

A vaccinator is paid partially from municipal funds, and is placed under the orders and directions of the Civil Surgeon, to whom reports of his work are made weekly. The leper asylum was opened in 1879, and is supported solely by private and municipal contributions. The building is situated outside the city, about a mile south of the Dehra cemetery, and is divided into two symmetrical parts giving separate accommodation to the males and the females. The present number of inmates, including servants, is 91. The income scarcely covers the expenditure."

In 1881-82 the income of the Dehra municipality amounted to Rs. 11,351 and in 1882-83 to Rs. 9,528. In the latter year the house-tax yielded Rs. 6,002 from a cess on houses, buildings, and lands in the station and the city; the *nasul* Municipality. lands and houses vested in the municipality

yielded Rs. 836 and the *sardai* let for Rs. 530 : gardens brought in Rs. 51; fines and pounds Rs. 940, and miscellaneous items, including the slaughterhouse, Rs. 1,108. The expenditure during 1881-82 amounted to Rs. 11,227, and during 1882-83 to Rs. 9,525. In the latter year the cost of collection was Rs. 475, or nearly five per cent on the income : head-office establishment cost Rs. 279 ; whilst Rs. 4,264 were spent on public works; Rs. 1,537 on police ; Rs. 200 on education ; Rs. 350 on charitable grants (vaccination and dispensary) ; Rs. 1,706 on conservancy ; Rs. 458 on watering ; Rs. 458 on lighting and Rs. 255 on miscellaneous objects. These figures giving the details for one year sufficiently show the character of the receipts and charges on account of the municipality. The cantonment funds which are devoted to similar purposes showed an income of Rs. 1,227 from the sale of grass and wood, rents of lands under cultivation, pounds, and other minor sources ; whilst Rs. 532 were expended on conservancy, repairs, and establishment. The affairs of the municipality are managed by a committee, the majority of whom are elected by the tax-payers. The number of houses assessed to the tax was 3,740 (118 in the civil station and 3,622 in the town), and the incidence of taxation is only about five annas per head per annum. The area of Dehra municipality is 2,315 acres, or 3.62 square miles : and of the cantonments is 566 acres.

The temple¹ or Gurudwára of the Udásís, the sect of religious ascetics founded by Rám Rái, their Guru, was built in 1699 A. D. and is the only object of historical interest. The central block, in which the Guru's bed is preserved, is a handsome structure, designed in the style of the Emperor Jahángír's tomb: at the corners, it has smaller monuments in memory of the Guru's four wives. The model adopted has naturally given a Muhammadan appearance to the whole, very curious in a place of worship built by Udásís, who suffered so much at their hands: brick, plastered over and pointed in imitation of mosaic, forms the material of the building. Three reservoirs, the largest of them being 230 feet long by 184 feet wide, are attached to the temple: two receiving supplies of water from the Rájpur canal and the third from rainwater only; its use, for boiling pulses, rendering it necessary to limit the supply to this source, as canal water is too hard for the purpose. The revenues of the temple include the income derived from seven villages in British territory and six in Tihri, for which no rent or revenue is paid to the State. The revenue thus derived has risen enormously since Mr. Shore estimated it (in 1827, at Rs 1635; Rs. 1,600 from the former and Rs. 35 from the latter) owing to the immense rise in the value of land, so that, by common repute, the chief priest or Mahant, who has the absolute disposal of the revenues of the endowment, is the richest man in the Dún. His election from among the disciples (*chelas*) of the last deceased Mahant was formerly guided by the Sikh chiefs of the Panjáb, a *nazarána* of Rs. 500 being presented to the British Government at the installation, with the complimentary gift in return of a pair of shawls. The distinctive head-dress of the sect worn by the high priest and his disciples is a cap of red cloth, shaped like a sugar-loaf, worked over with coloured thread and adorned with a black silk fringe round the rim. The acknowledgment of Guru Rám Rái's saintship is not confined to the Udásís, but most Hindu sects furnish devotees, especially in the Dehra Dún, where his influence was most felt. Perhaps, however, the most enthusiastic of his worshippers will be found now, as heretofore, among the Cis-Satlaj Sikhs. Owing to the doubt cast upon his legitimacy and the divergence

¹ See Gaz. XI. 840.

of his peaceful doctrines from the stern tenets of Śrī Guru Gobind Singh, the Akhālī Sikhs have uniformly refused him recognition, but notwithstanding this, it is on record that Ranjīt Singh, when apprehensive of impending death in the spring of 1826, sent an offering of Rs. 500 to this temple.

The time fixed for the annual ceremonies of the saint is that of the Hindu festival known as the Holi, usually falling in April. A fair (*mela*) lasting 10 days, and called *Sangat*, commences on the 1st of Chait, and, on the sixth, the ceremony of hoisting a new flag, upon a monster flagstaff standing between the temple and the large tank, takes place. Hundreds of pilgrims, to each of whom a day's food is given by the Mahant, aid in this duty; but the total number attending the fair varies from 3,000 to 10,000, the larger figure being reached only when the Hardwār fair, whither the pilgrims flock immediately after, is very largely attended at the *Kumbh* and *Adh-kumbh*. The authentic history of Dehra may be

History.

said to date from the close of the seventeenth century (1756S., 1699 A.D.), when Rām Rāi retired to the Dūn, after his failure to obtain the recognition of his claims to succeed his father as Guru, and founded a sect of dissenters. He, at first, resided at Kāndli on the western side of the Tons river, but ultimately removed to Kharbara (now included in the modern town of Dehra) and built the temple named after him at the neighbouring village of Dhāmuwāla, unless, as is sometimes alleged, it was constructed by his widow, Panjāb Kuar. His presence soon attracted numerous devotees and a flourishing town, called Gurudwāra or Dehra, grew up around his dwelling¹. Coming with letters of recommendation from Aurangzeb to Fateh Shāh of Garhwāl, the Guru was welcomed, and his temple endowed with the three villages of Kharbara, Rājpur. and Chama-Surī, to which four others—Dhāmuwāla, Miyānwāla, Panditwari, and Dhartawāla—were added by his successor. Captain Raper visited Dehra, in 1808, and found it an "extensive village." It had been a populous town a few years before, its decadence resulting from the constant succession of invasions by the Sikhs and Gujars. The rule of the Gorkhālīs, commencing in 1803, closed in 1814, and

¹ Locally the name is derived from the resting-place of the body (*dal*) of Guru Rām Rāi.

the formal annexation of Dehra Dún to the district of Saháranpur in 1815 was followed by the introduction of the usual revenue and police sub-divisions and an establishment for the latter (police) on an extremely modest scale, but it was not till February, 1823, that any real administration commenced. The Honorable Mr. Shore then assumed charge under the designation of Joint-Magistrate, and, during his residence at Dehra (till 1828), the town along with the rest of the district gained greatly from his reforming hand. Mr. Shore's zeal communicated itself to the people, whom he induced to repair the roads, and he himself advanced the funds (which were hardly ever repaid) required to build the Dehra jail, and to establish shops on the road, frequented by travellers to Mussooree and Landour, places which were then beginning to be visited by Europeans from the plains.

Amongst the local projects for the improvement of the valley is a railway to connect it with the plains. The cost of a metre-gauge line about 75 miles long from Deoband or Nágál on the Sindh, Panjáb and Delhi Railway *viâ* Rúrki and Hardwár to Dehra and thence to Rájpur at the foot of the mountain, has been estimated at Rs. 35,00,000. The sources of revenue relied on are (1) the traffic of Rúrki ; (2) the Hardwár pilgrim traffic ; (3) the traffic of the Ganges canal, and (4) the general traffic of the Dún and the hill sanitaría. The average of five estimates gave this expected revenue as Rs. 6,30,334. The scheme was submitted to the Local Government, but the concessions asked for were not granted. Meanwhile a concession has been granted by the Secretary of State for India to the Oudh and Rohilkhand Railway for the extension of their line to Saháranpur, with probably a branch to Hardwár, which has thus deprived the promoters of the Dehra Dún Railway of the main item—the pilgrim traffic—in their scheme.

Dehra Dún, district of (see the end of this volume).

Deoprayág, or Deva Prayága, a town in patti Bangarh, of native Garhwál, at the confluence of the Alaknanda and Bhágirathi. The former flows from the east and the latter from the north, and, at the vertex of the right-angle formed by their junction, the town is situate. The contrast formed by the two streams is very remarkable ; the Bhágirathi runs down a steep declivity with a rapid

course, roaring and foaming over large stones and fragments placed in its bed, while the placid Alaknanda, flowing with a smooth and unruffled surface and of three times the volume, gently winds round the point. The banks of both rivers are composed of hard black rock ; but while those of the Alaknanda are almost perpendicular to the height of 80 or 100 feet, those of the Bhágirathi are shelving and expanded. The Alaknanda, the deeper and more considerable river, is, at the season of low water, 142 feet in breadth, and in the rainy season rises 46 or 47 feet. The Bhágirathi is, at the season of low water, 112 feet in breadth, and rises 40 feet in the rainy season. Each river is crossed by a *jhúla* or rope bridge : the united stream having a breadth of 80 yards receives, below the confluence, the name of the Ganges. The village is built on a small flat, below a perpendicular cliff, at an elevation of 100 feet above the water, on the scarp of a mountain rising behind to the height of about 800 feet. A huge flight of steps, cut in the rock, by which even cattle can travel gives access to the town from the water's edge.

The houses are arranged so as to form two rows of unequal length, joined at a right-angle, the longer row facing the Bhágirathi, the other, the Alaknanda. They are generally two stories high, built of large stones, cemented with lime mortar, and having sloping roofs covered with shingles. In the upper part of the town, stands a temple sacred to Rámachandra. It is situate on a terrace from twenty to thirty yards square and six feet high, and is built of large blocks of cut stone piled on each other, without cement, so as to form a pyramid, bulging in the middle and decreasing rapidly towards the summit, which is surmounted by a white cupola ; and over all, is a square sloping roof, composed of plates of copper, crowned above with a golden ball and spire. The entrance is on the western side, in a portico, from the roof of which are hung bells of various sizes. Under the shelter thus provided the worshippers perform their devotions. The image of Rámachandra, about six feet high, carved in black stone, but painted red, except the face, is seated opposite the door, and under the eastern part of the cupola. Before the idol, and opposite the portico, is the brazen image of a Garuda ; one knee is bent on the ground, and his hands are joined in the attitude of prayer. The whole height of the building

is between 70 and 80 feet. Under the terrace is a temple sacred to Adi-Bishveawar. Deoprayāg is a peculiarly sacred place of pilgrimage for Hindūs, being one of the five principal 'prayāgas' or confluences. The grand rite is ablution, which takes place, at the confluence of the rivers, in two *kundas* or basins, excavated in the rock, at a level a little lower than the surface of the current, which here is so rapid and violent as to sweep away any attempting to bathe in it. The names of the pilgrims are registered, on their paying to the officiating Brahmans the usual dues. These Brahmans also enjoy the revenue derived from 25 villages granted by the Rāja of Garhwāl; and, notwithstanding the celebrity of the place, are compelled to eke out a subsistence by the practice of trade. The temple, as well as the rest of the town, was much shattered by an earthquake in 1803, but was subsequently repaired by Daulat Ráo Sindia. The town contains between 200 and 250 houses, inhabited principally by Brahmans from the Dakhin. The heat is sometimes very great, exceeding 100° at noon in the shade. Elevation above the sea, of the town, 2,266 feet; of the stream, 1,953. Latitude 30°-8', longitude 78°-39'. The village of Bāhs in British Garhwāl, to which is attached a small bazar, is nearly opposite to Deoprayāg. They are connected by a rope bridge (*jhula*) of about 120 feet span.

Devi Dhūra, or Deh, a station on the road from Almora to Lohūghāt, 13 miles from Pharkā, 17 miles from Dol, and 82 miles from Almora, 6,633 feet above the sea, is situate in north latitude 29°-24'-56" and east longitude 79°-54'-30". There is a bungalow and a grain-shop here where common supplies may be obtained. On the north-west face of the mountain, a few feet below its crest, there are two groups of colossal blocks of grey granite piled on each other, consecrated to Mahādeva, Varāhi Devi and Bhīm Sen, and softened by a few picturesque oaks, *deodars*, walnuts and a large *silang* (*Olea fragrans*) tree. Similar boulders are strewn over the surface of the surrounding mountains, especially on the upper part of the deep depression in the range immediately north. Between two of the main boulders, in a recess crowned with a grove of *deodars*, is a celebrated temple at which a fair is held in June-July, when many goats and buffaloes are offered at the shrine. There were two noteworthy customs at this fair: one was when they dragged the idol to the top of the plateau a few hundred yards off

where the cairn of the Great Trigonometrical Survey stands, the draggers being men all naked ; another was the custom of forming two parties, who attacked each other with sticks and stones (known as *bagwili*), a practice not uncommon throughout Kumaun and Nepal. To the west of the temple are two boulders ; the uppermost of which, called Ransila, about one hundred feet in length, is cleft through the centre by a deep fissure, at right angles to which there is a similar rift in the lower rock. On Ransila rests a smaller boulder, said to be the same that was employed by Bhīm Sen to produce these fissures, in proof of which, the print of his five fingers is still pointed out. The surface of Ransila also presents certain other marks and figures on which the Pándu brothers amused themselves at *pachisi*, an indigenous kind of chess. Both boulders and fissures are indeed sufficiently extraordinary to warrant some superstitious legends among an ignorant population. Some writers hold that these wildernesses of granitic boulders, as well as the fissures, originated in "a contraction of the distended surface of the granitic mass when first upheaved." Others appear more inclined to attribute the boulders to the existence of hard and highly crystallised nuclei, which have resisted the decomposition going on all around, caused probably by the action of water on the superabundant felspar. Many of the boulders are also perishing, but somewhat differently ; large and thick concentric coats scale away, and crumble, by the process of desquamation, which is equally remarkable in the trap rocks. The fissures appear to be too fresh and sharp to allow of the supposition, that they are coëval with the elevation of the rock : they are probably due to the unequal cooling of the mass when a frosty night has succeeded a very hot day.

Devi Dhúra occupies the north-east and highest angle of a great granitic plateau, steep on the east and north, but sloping gently to the west and south : it is covered with wood and furrowed by deep ravines. One of these commences at the shrine, and soon collects a pretty stream deeply shaded by horse-chestnut and other trees : at its head is a *naula* or covered well. This granitic ridge extends continuously from Dernáth near Fort Hastings to Saur-Phatak within three miles of Dol. At Saur-Phatak the road leaves it, but the formation is probably continued to Siyáhi-Devi, as the granite re-appears on the west and south faces of the Pandani and

Mukteswar mountains; in the bed of the small stream which joins the Kúmniya below Piúra, and on both sides of the Kúmniya up to Kapleswar—(Madden).

From Pharka, the road is good but tortuous, following the tabular and rounded summit of the granitic range well wooded with rhododendron, pine, pear, *káiphal* and *bánj* (oak). The road descends at once from the bungalow for a mile and a half, and ascends as much to the Airi peak (over 5,000 feet). At the sixth mile, is a *deodar* grove and temple called Páti, around which are the sources of the Ratiya, an affluent of the Ladhya. At four miles from Deví Dhára, the road descends to a *col* called Garátri-lekh, with the village of Gám below on the left. Hence there is a considerable ascent to the bungalow at De. The view from the bungalow is one of the finest in Kumaon: it includes Thákil and Thám on the east, Binsar on the west, the Gágar range to the south-east, and the peaks of Gangoli to the north. Hence to the new bungalow at Mornaull on the road to Dol, there is, first, a steep descent to a *col*, on the southern side of which rises a feeder of the Ladhya and on the northern a feeder of the Panár, an affluent of the Sarju. Hence the route ascends gradually and proceeds along the ridge to the new bungalow at Puyapáni (cherry-tree water). The scenery here is beautiful and the mountains are well wooded with oaks, rhododendrons, *ayér*, *káiphal*, *pharas*, *shamkhará*, *uñte*, *kákhu* and *báunra*, and the level is high enough for *Primula denticalata* and an occasional yew. Three miles short of Dol (17 miles from De), the road descends to a second *col* called Saur-Phatka, where there are pools of water and a few carved stones. Here the granite ceases, and is replaced by stratified rocks, quartzose, micaceous and slaty, dipping north. A mile beyond Saur-Phatka, the road passes an extensive wilderness of vast angular gneiss fragments; perched on the top of a group of these is a rudely conical mass of the same material, twenty to thirty feet wide at the base and fully fifty feet high. It is called Nágedo and is worshipped as a phallus: the foundations of old buildings are visible around. A rivulet, one of the heads of the Panár, rises between these boulders and the high road, and following it for a mile, the traveller comes on a very pretty, small, secluded dell shaded by *deodars*, chestnuts and *tílenj* oaks, with a temple to Vishnu: a path leads hence direct to Dol (q. v.), where the bungalow now belongs to a planter, the new one being situate three or four miles farther on.

Dewalgarh, a parganah of the Garhwál district contains seven pattis or sub-divisions, each of which is separately noticed—viz., Bidolayún, Bachhanayún, Chalansyún, Dhanpur, Ghurdorayún, Kandársyún and Kathulsyún. Dewalgarh is bounded on the north by Nágpur, on the east by Chandpur, on the south by Bárahayún and on the west by Tibri. The assessment of the land-revenue has been as follows:—

1815.	1816.	1817.	1820.	1823.	1825.	1828.	1840.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1,896	2,345	2,869	3,415	4,306	4,367	4,412	4,650	8,652

The records of the current settlement show that there are 269 estates comprising 392 villages, and containing a total assessable area of 10,335 acres, of which 9,464 are cultivated. The mill-rent amounted to Rs. 237 and the land-tax to Rs. 8,558, of which Rs. 189 were alienated in *saddbat* and Rs. 364 in *gūnth* and *mudft*. The land-revenue fell at Rs. 0-13-3 per acre on the total assessable area, and at Rs. 0-14-5 on the cultivation. The population in 1841 numbered 9,474 souls, of whom 5,373 were females: in 1853, 20,408 (10,213 female); in 1858, 17,645 (8,543 females); in 1872, 25,036 (12,657 females), and in 1881, 29,288 (15,054 females). Dewalgarh is named after the old temple of the Rajas of Garhwāl which still exists and possesses considerable endowments in British Garhwāl and Tibri. Srinagar the capital is situate in the parganah and also the Dhanpur copper mines. Srinagar still carries on some trade with Najibabad and the formation of the pilgrim road to Hardwār has made it the resort of numerous pilgrims during the season. The civil station and residence of the Senior Assistant Commissioner is at Pāori, where there are also civil courts, and near it is the American Episcopal Methodist Mission and a tea-plantation. The Dhanpur copper mines are the best in the province and have been already noticed. Writing in 1840, Mr. Batton states that "twenty-one villages, large and small, have always been attached to the mines, and it has been found impracticable to separate the leases of the villages from that of the mines, old custom having made the labour and supplies derived from the villages essential to the mining leases. Out of a total of Rs. 1,901 paid by the farmer of the mines it was found that he collected only Rs. 266 from the villages. The assessment on the Dhanpur mines in 1864 amounted to Rs. 555, including Dobri and Morgadh. The Panai and Srinagar valleys are eminently rich and beautiful and the scenery of the Dhanpur range is particularly striking and picturesque. Greywacke, quartz rock, trap, clay slate, talcose slate and limestone, alpine and dolomitic (the latter containing the copper ores) are the prevailing formations.

Dhājyūlī, a patti of parganah Chandpur in British Garhwāl, is bounded on the north, by patti Kandārsyūn; on the west, by the same patti and patti Choprakot; on the south, by the latter patti, and on the east, by Taili-Chandpur. The census of 1881 shows

population of 2,396 souls. The land-revenue in 1884 amounted to Rs. 521 and is collected by the patwári of Choprakot, residing at Kanyúr. Dháijyóli occupies the upper valley of the southern branch of the western Nyár and is chiefly filled by the peaks of Náori (8,052 feet), Táarakakand (9,000) and Sont-khál (9,294).

Dhangu Malla, a patti of parganah Ganga Salán of British Garhwál, is bounded on all sides by other pattis of the same parganah, and on the west is separated from the Udepur patti by the Hinwal river, which rises in Karondu Walla and flows along the southern and western boundary of this patti. There are schools at Dihkhet and Thantoli. The population in 1881 numbered 5,953 souls, of whom 3,049 were females. The land-revenue in 1884 amounted to Rs. 1,916. The patwári of this patti resides in Dihkhet and collects the land-revenue of Karondu Palla also, both of which in 1864 gave Rs. 2,491 from all sources. Garhkot lies in latitude 29°-57'-30" and longitude 78°-35'-0".

Dhangu Talla, a patti of parganah Ganga Salán in British Garhwál, is bounded on the north and north-west, by the Ganges; on the south, by the Udepur patti, and on the east, by the Nyár river, separating it from parganah Bárahayún. The census statistics for 1881 show 2,377 males and 2,429 females. In 1884, the land-revenue amounted to Rs. 1,267, which is collected by the patwári who resides in Chandpur, and collects the land-revenue of Udepur Malla also; both in 1864 aggregated Rs. 2,380 for land-revenue and *saddbart* paid by a population of 5,675 souls. The patti is traversed by the Hardwár and Srinagar road, besides village tracks. Dhángu Talla lies between the Hinwal and the Ganges and is highly cultivated throughout.

Dhaniyakot, a parganah of Kumaon, comprises four pattis, each of which is separately noticed—*viz.*, Chauthan, Dhaniyakot, Uchákot and Simalkha. The assessment at various periods since the conquest was as follows:—

1815.	1817.	1818.	1820.	1823.	1828.	1833.	1843.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
3,153	4,139	4,629	5,091	5,412	5,412	5,494	5,507	7,164

The present land-tax falls at Rs. 1-4-1 per acre on the whole assessable area, and at Rs. 1-9-7 per acre on the cultivation. The area assessed to revenue amounts to 5,702 *bís*, of which 1,229 are

culturable and 4,473 are cultivated (980 irrigated). The population at settlement numbered 11,767 souls, of whom 6,008 were males : in 1872, 8,636 males and 6,113 females : and in 1881, only 1,257 males and 1,186 females are recorded: the census returns referring only to the portion of the parganah in the Bhábar tahsil. Thirty-two *báts* are held as temple endowments and 965 free of revenue. The patti lies along the northern slopes of the western Gágar range and was once a very retired portion of the district, but now, owing to its proximity to the sanitaría of Naini Tál and Ránikhet, it is well known. In Tallakot, one of the most flourishing estates, the revenue was raised in 1843, and has been again increased and some of its hamlets have been made separate estates. Simalkha suffered from the floods in 1840, but has since in a great measure recovered. In Chauthán the villages are large and flourishing, though few in number. The people, in addition to their general pursuits in the Bhábar, convey their produce to the bazárs of Naini Tál, Ránikhet and Almora, and benefit by the pilgrim route to Badrináth which passes through the parganah. The whole tract is rich in an agricultural point of view, and its orchards of mangoes, plantains, oranges, &c., show the general mild temperature prevailing. But the frosts in winter are extremely severe, and people are glad, both for the sake of pasturage and climate, to repair to the Kota Bhábar. The bháyachára tenure prevails, but two zamíndáris also occur. The iron ores of Dhaniyakot chiefly red hæmatite) are found in Khairna and Tutail, but are little worked.

Dhaniyakot, a patti in the parganah of the same name in Kumaon, is bounded on the north, by the Kosi river, which separates it from Chaugaon ; on the east, by Kotauli Talli, Rámgar Talla and Malla ; on the west, by Simalkha and on the south, by Kota Malla and the Chhukháta parganah. The assessable area comprises 1,896 *báts*, of which 543 are culturable and 1,353 are cultivated (275 irrigated). The land-tax in 1815 was Rs. 1,448, rising to Rs. 1,933 in 1820 and Rs. 2,030 in 1843. The present assessment is Rs. 2,265, which falls at Rs. 1-3-1 per acre on the total assessable area and Rs. 1-10-9 per acre on the cultivation : 858 *báts* are held free of revenue, comprising some very fair land. The population at the time of settlement numbered 5,079 souls, of whom 2,592 were females. Two villages were received from Simalkha and

four from Chhakháta at the recent settlement. The patwári usually resides at Majhera; there is a school at Mallakot.

Dhákuri, or **Dhákuri-Bináyak**, a halting-place with a bungalow (without attendants) on the route to the Pindari glacier, six miles from Lwárhket, 57 miles from Almora and 7 miles from Kháti.

From Lwárhket or Lohárhket to Kháti a march of about four hours leads to Tanti about 300 feet below the pass over the Dhákuri-Bináyak ridge, of which the peak rises on the left to a height of 10,541 feet. The path commences to rise at once on leaving Lwárhket and is in parts very steep and rocky, interspersed with occasional undulating meadows. One large stream is passed which, rising between the pass and the Chaur-ke-dánda, flows down the spacious wooded glen towards the Sarju and in one spot forms a fine water-fall. The limestone rock ceases at Surhing, and is replaced by quartzose rocks, and finally by gneiss. The views across the Sarju are very grand, and from the pass a new and magnificent, though contracted, prospect of the snowy range extending from the Nanda-kot peak on the east to Mántoli-ka-dhúra (Triśúli) on the west is seen. The eastern peak of the Triśúli faces the west in a great bluff, from which a long easy ridge, presenting an unbroken sheet of snow, slopes down to the east, connecting the Triśúli with the Nanda Devi cluster. Strange to say that here, within 20 miles of the two great rocky peaks of this cluster, and elevated 10,500 feet, they are invisible, being concealed by the two beautiful pinnacles of pure snow, which from Almora are seen to be merely the abrupt terminations of two immense apura, the easternmost of which is there known as Nandakot, "Devi's bed." From this point of view it rises into a fine and lofty spire. In the hollow between the Triśúli and Nanda groups rises the Sundardúnga or Redings river, which, flowing nearly south down a narrow and most profound glen, joins (6,440 feet) the Pindar a little above Wáchhem, affording probably the best and easiest route to the traveller desirous of penetrating to the core of the Nanda Devi mass. This stream has its source in a glacier like that at Pindari. East of Nanda Devi, in a deep col, is "Trailis' pass," supposed by him to be 20,000 feet high; its eastern portion formed by the north-west shoulder of Nandakot, which mountain closes the view in a colossal rectangular summit of pure snow, with the glen of the Pindar easily made out. The line of perpetual or at all events of unmelted snow was very well defined along the whole extent of the range (September), certainly 2,000 feet below the crest of Trailis' pass. The *Quercus dilatata* (*moru*) and *Quercus semecarpifolia* (*karshu*) oaks are abundant on the eastern exposure of the Dhákuri-bináyak. The descent on the western side is rapid, first through forests of *karshu* oaks, which soon becomes blended with abundance of *Alnus webbiana* (*rágha*) forming boundless forests on this fine range. Below these, we passed down, through luxuriant meadows, nearly to the Pindar, opposite to the large village of Wáchhem. Here a path strikes off to the left to Chiringa in the Pindar valley below Gwáidam, and when passable enables one to vary the return route to Almora. This long, but in general not very steep descent, leads to a torrent, from which the road again ascends considerably towards Kháti, three miles or so further, the road lying amongst horse-chestnut, maple, sumach, mountain bambu, *Quercus incana* (*báraj*) and *moru* oaks, hornbeam (*gásh*), ash, &c. Kháti

has no permanent village, but there is a Baniya's shop; the only cultivation, half a dozen fields of *chua* (*Amaranthus esverdane*) Kháti, at an elevation of 7,300 feet, consists of some beautiful, open, and swelling lawns, closely hemmed in by exceedingly steep and lofty mountains, either covered with grass or enveloped in dark forest. On the north-west, about 300 feet below, the Pindar roars along its narrow gully, up which, whenever the clouds cleared a little, several high snowy and black, rocky peaks of the great range appeared close at hand—(Madden).

Dhanpur, a patti of parganah Dewalgarh, is bounded on the north, by the Alaknanda river; on the south, by pattis Bachhansyún and Kandársyún; on the east, by patti Ránigadh; and on the west, by Tihri. The Alaknanda receives the Mandákini on its right bank at Rudrprayág in the extreme north-west corner of this patti in latitude $30^{\circ}-17'-10''$ and longitude $79^{\circ}-1'-32''$. Thence a road follows the left bank of the Alaknanda to Karnprayág and is joined at Chhatwá pipal, where there is an iron bridge, by a road from the south, here crossing the Alaknanda on to the Kedárnáth road. Seven villages were received from Dewalgarh. The population in 1881 numbered 5,206 souls, of whom were 2,635 females. The patwári of this patti resides in Panáí, where there is a school, and collects the land-revenue of patti Ránigadh also; both aggregated in 1864 Rs. 1,947 for *sadibart* and land-revenue and Rs. 64 for *gúnth* paid by 4,079 souls.

Dhaundyálsyún, a patti of parganah Malla Salán in British Garhwál, is bounded on the north, by Choprakot and Meldhar; on the west and south-west, by Bangársyún; on the south, by Sábali, and on the east, by the Kumáun pattis of Malla Chaukot and Garhwál Patti, Chauthán. On the north it is divided into two parts by Meldhár: the northern portion contains Jaspur on the Chariya stream and the Chaupatta tea-factory further south; the southern portion contains Búngidhár. The road from Almora to Páori passes through the southern portion of the patti. In 1864 the village of Kamuliya was received from Bangársyún. The patwári of Chauthán, residing at Kapholgaon, collects the land-revenue of this patti also, which amounted to Rs. 699 in 1884. The population, according to the census of 1881, numbered 2,369 souls, of whom 1,216 were females.

Dháron, a village on the left bank of the stream of the same name in patti Páuli Dún of Garhwál, is situate on the line of cart

road from Kotdwára to Rámnagar on the border of the Bijnor district. A good road passes hence to Páori, bifurcating at Dosoti to Kainúr (Kanyúr). The Páori road crosses the outer ridge by the Kanchangháti pass to Sont-páni and the Kainúr line by the Bogti-ya khál to Kinanauli. From Sont-páni there is a slight ascent to Kanchangháti and a descent to Pípalsoti, 5 miles 3 furlongs 33 poles, and thence to Dháron, 5 miles 3 furlongs 2 poles. From Kinanauli there is a slight ascent to the Bogti-ya-khál and a descent to the Dánapáni river 3 miles: following the stream to a level crossing and then to the junction with the Pípalsoti stream at Dosoti and crossing and recrossing the united stream chiefly by bridges Dháron is reached, 8 miles 1 furlong 24 poles. There is a police-station and grain-shop here.

Dhauli (western), or white river, a principal tributary of the Alakuanda, rises in parganah Malla Painkhanda in British Garhwál near the Niti pass and unites with the Vishnuganga at Vishnuprayág near Joshimath, in latitude $30^{\circ}29'-30''$ and longitude $79^{\circ}45'-15''$, to form the Alaknanda. It has a most tortuous course and is to its junction a roaring torrent almost everywhere. There are three sudden falls in the river between the villages of Malári and Tapoban. The last, which is about six miles above Tapoban, is the greatest; in the space of 250 yards the fall is at least 150 feet. For the first portion of its course the river dashes below over huge boulders, the water being scarcely visible, while it ends in a fall of some 60 feet. In several places these boulders form natural bridges which are found useful when those constructed by the local authorities are swept away. The Dhauli is joined in its course by several snow streams, the chief being the Ghirti and the Rínúganga, which last rises on the northern side of the Nanda Devi peak. The whole course of the Dhauli as far as Tapoban may be said to be through a narrow pass with almost perpendicular cliffs on either side several thousand feet high and wild in the extreme.

At a stream entering the Dhauli near Samangwenta the Dhuniyas wash the mud for gold. They use a primitive-looking but neatly-made cradle of reed work and are quite ignorant of the use of mercury for extracting the gold. Elsewhere the apparatus consists of a wooden boat-shaped trough, two shallow trays of wood, a bambu cleve, half a gourd, a little quicksilver, some pieces of skin, and scales and

weights. The trough is four feet long, eighteen inches broad, and as many deep, with a hole near the bottom at one extremity.¹ It is placed on the river edge, with the end in which the hole is, somewhat depressed. The sieve is formed of straight pieces of split bambu laid side by side, and is laid across the trough. One of the two persons employed in the operation spreads a trayful of sand upon the sieve, and the other, turning up its edge so as to prevent any of the sand from being carried off, pours upon it a gourd full of water. This he repeats until the water, having the finer particles of the sand in suspension, filters through the interstices of the sieve and leaves the stones and pebbles and coarser substances on the surface. As a sufficient quantity of these washings accumulates in the bottom of the trough, the water drains off through the hole in its lower extremity, and the mud which is left is then again washed for the gold. For this purpose it is taken up in the wooden trays and fresh water poured upon it: the trays are then turned round by the hand, and the coarser and lighter portions separately, and removed from the heavier and finer, until the largest grains of gold become visible and can be extracted, when they are wrapped up in the pieces of skin. In order to recover the firm particles of the metal the remaining portion of the sand is triturated with the quicksilver, and that again is driven off by heat.

Dhauli (eastern), a principal tributary of the Káli river in eastern Kumaon, has its remotest sources in the glaciers to the north-west of the Dawa encamping-ground (14,860 feet) leading to the Naya-dhúra or Dárma pass into Tibet in north latitude $30^{\circ}26'-0''$ and east longitude $80^{\circ}31'-0''$. The source lies to the north of the main range of the Himálaya and the valley of the river forms one of the two into which Mulla Dárma is divided. It passes by Dawa, the Pungrung encamping-ground (14,100 feet), Khimling (13,060 feet), Rama (11,330 feet) to its junction with the Lissar on the left bank (10,370 feet). Thence by Dhánkú, Go and Sela to its junction with the Káli on the right bank at Khela-Syálapanth in north latitude $29^{\circ}26'-50''$ and east longitude $80^{\circ}38'-40''$. Its stream is in general a succession of violent rapids in a rocky channel amidst awful precipices and ravines. Webb describes it at twenty-five miles from its source as "violent, turbid, in continued rapids from six to twenty-five feet; bed rocky, average breadth from sixteen to twenty yards;" and adds, that after rain "the water is so foul and turbid as to be unfit for drinking." The road to Tibet by the Dárma pass proceeds up the course of the river, passing by means of spar bridges from side to side, according to the exigencies of the path, which sometimes winds along the faces

¹ Travels, Hím. Prov., p. 7.

of nearly perpendicular precipices ; yet, during the season when the passes are open, this difficult track is crowded by innumerable laden goats and sheep, bearing grain and other merchandise from the lower districts to Tibet. There is a difficult and dangerous pass from Rálam, on a feeder of the Gori, to Sípú and Maroha on the Lissar branch of the Dhauli which proceeds by the Phula-Yáuktí stream.

Dhikuli, a village in the Kota Bhábar of Kumaon on the right bank of the Kosi, is situate in north latitude $29^{\circ}28'5''$ and east longitude $79^{\circ}11'-30''$, at an elevation of 1,380 feet above the level of the sea on the Almora and Rámnagar road, 50 miles north-east from Murádabad. The formation of the hills, all the way from Rámnagar to Ukhaldhunga and up to 4,000 feet above the sea-level, is principally of sandstones, conglomerates, clays and layers of loose boulders imbedded in clay and sand. These formations alternate one with each other in the order stated, but the boulders in clay and sand do not extend much more than three hundred feet above the river bed. The sandstone is seldom reddish in colour and never purely red, shades of gray and greenish gray predominate. The hardness of the sandstone varies directly in the order of the depth of its stratum: that met with but a few hundred feet above the river is soft and friable ; all the rest is harder in proportion to its height, but none can be said to be so compact as not to be broken up by an ordinary blow from a hammer. The conglomerates also are easily separable. There are two varieties of limestone : one a whitish coarse-grained stone, is abundant in the hills west of Dhikuli and is quarried for use within a few feet of the Rámnagar road. On the western limit of the cultivated fields of Dhikuli and in many places overhanging the main road is a ledge of conglomerate rock surmounted by extensive '*chaurs*' or levels intersected by a few ravines. On one of these are the remains of ancient buildings a few feet from the surface locally identified with that Bairátpatan, the capital of the old kingdom of Govisana, visited by Hwen Thsang in the seventh century. There are many fine specimens of capitals of pillars, medallions, figures of lions and other animals and other Buddhistic designs. Many of these have been used in a building near the suspension bridge as ornaments for archways, pillars and mantelpieces. Some of the

pillars are foliated, interspersed with birds, dragons, lions, &c. On a plateau above is an ancient well. Another set of remains exist on the Kua-ka-chaur, above Mohan. Dhikuli was formerly a station for a guard of native troops. The scenery around affords some of the wildest and most picturesque views in the whole of the lower hills and well repays a visit.

Dhugsúndhár, an encamping-ground on the road from Káló-shahíd to Páori, is situate in patti Talla Badalpur of parganah Talla Salán in Garhwál in the valley of the upper waters of the Paláin river, in latitude $29^{\circ}-46'-0''$ and longitude $78^{\circ}-16'-0''$: distant 12 miles 4 furlongs 10 poles from Chawalchhara, and 8 miles 8 furlongs 18 poles from Ukhlet. The road hence to Ukhlet ascends by the Chúndai-khál to the Kúlar-gadh, which is crossed by a bridge, and thence along the ridge to the valley of the Maidi river, along which it takes a course to the north-west, to the Maidi bridge on the road between Kotdwára and Khátali, 8 miles 1 furlong. Hence level for 280 yards and a slight descent to the ford across the Nyár river, on the right bank of which the encamping-ground of Ukhlet is situate in patti Maudársyún. This route is low and hot throughout, though the most direct. Supplies are unobtainable below this and should be taken hence.

Dhúraphát, a patti of parganah Phaldákot in Kumaon, is bounded on the north by Malli Doti and Chaugaon; on the west by Chauthán and Koyán Malla; on the east by Chaugaon and on the south by Uchakot. Ten villages were transferred to and five were received from Chaugaon at the recent settlement. It is a hilly tract with little cultivation. The principal villages are Berblek, Balyáli and Músyoli. The assessable area comprises 1,360 *bists*, of which 1,010 are cultivated (19 irrigated) and 349 acres are culturable. The land-tax yielded Rs. 878 in 1815, Rs. 1,021 in 1820, Rs. 1,114 in 1843, and now amounts to Rs. 1,324, which falls on the total assessable area at Re. 0-15-7 per acre and on the cultivation at Re. 1-4-11. The population at settlement numbered 2,379 souls, of whom 1,259 are males. The patwári resides at Chápar and there is a school at Haldyáni.

Dhyánirau, a parganah of Kumaon, comprises six pattis, all of which are separately noticed—*viz.*, Bisjyúla, Chhabís Dumaula,

Chaubhansi, Chaugadh, Malli and Talli Rau. The assessment of the land-tax at each settlement was as follows:—

1815.	1817.	1818.	1820.	1823.	1826	1833.	1843.	Current.
Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.
4,078	4,379	4,935	5,428	5,746	6,052	6,190	6,367	10,464.

The incidence of the revenue on the whole assessable area falls at Re. 0-12-6 per acre and on the cultivation at Re. 1-2-9 per acre. The assessable area comprises 13,381 *bísís*, of which 4,419 are culturable and 8,961 are cultivated (860 irrigated). The population at settlement numbered 8,996 males and 7,786 females; in 1872, 8,685 males and 5,813 females; and in 1881, 5,121 males and 4,816 females, a part of the population being enumerated in the Bhábar. Six hundred and seventy-four *bísís* were appropriated as temple grants. There are 134 maháls or estates comprising 171 villages. The upland portion of this parganah occupies the basin of the Ladhya river from Devi Dhúra on the north to the Bhábar on the south. In Chaubhainsi the chief wealth of the inhabitants consists in their herds of cattle, which they pasture on the hills in the summer and take down to Chorgalia in the Bhábar in winter. Some of the villages are large and populous, but the cold climate is averse to agriculture, and even hill rice is not grown. In Malli and Talli Rau there are abundant crops of wheat, rice, millets, and turmeric, and its irrigated lands yield the fine kind of rice known as *básmatí*. The Kaira, Bora and Deo clans are the principal landholders; the two former colonised the sub-divisions called after them to the west of Almora. There are mines of iron of good quality at Manglalekh and of copper at Kemu-khet. In the settlement and census papers the parganah is divided into two parts—the Dhyánirau portion in tahsil Champáwat and the Chaubhainsi portion in tahsil Bhábar, a proceeding which creates some confusion in returns.

Díndíhát, a patti of parganah Síra in Kumaon, is bounded on the north, by patti Goriphát of parganah Jubár; on the west, by Tallades of the same parganah and Athbisi Talla and Muli; and, on the south and east, by the Askot pattis. The road from Bageswar by Thal to Askot passes through Díndíhát, of which the principal villages are Bhunurha, Guráli and Wagla (from Díndíhát). The assessable area comprises 1,079 *bísís*, of which 268 are culturable and 811 are cultivated (621) irrigated). The land-tax amounted to

Rs. 501 in 1815, Rs. 706 in 1820, Rs. 817 in 1843, and is now Rs. 1,560, which falls on the total assessable area at Rs. 1-7-1 per acre, and on the cultivation at Re. 1-14-9 per acre. The population at the time of settlement numbered 1,488 souls, of whom 785 were males. The patwári usually resides at Morthi; there is a school at Hát

Diuri Tál a small lake about seven miles north-east of the village of Ukhimath on the ridge of a spur which extends from the Badrináth peak to the Mandákini river below the above-named village. The lake is about 400 yards long by 250 yards broad and 66 feet deep. It is of an oval shape. It is very deep on the northern side and is nowhere very shallow. The view from its banks is one of the grandest in the hills, the whole mass of Badrináth being visible from base to summit at a distance of about 15 miles. Early in the morning the snowy range is clearly visible reflected on the water. This range includes the Badrináth and the Kedárnáth peaks to the west of it. The elevation of Diuri Tál is about 8,000 feet—(Garstin).

Diwáli, or **Dwáli**, a halting-place on the route to the Pindari glacier, 8 miles from Kháti, 70 miles from Almora and 5 miles from Phurkiya, is situated in patti Malla Dánpur of Kumaon, at the confluence of the Kuphini and Pindar rivers.

The path from Kháti lies first on the left bank of Pindar, then for a short distance on the right and finally returning to the left, keeps nearly to its level, except a few short but steep ascents and descents. The scenery is magnificent, the mountains rising like walls to a vast height on each side, broken into great buttresses and universally clothed with the deepest forest, amidst which three or four fine cascades pour down their mass of foam from an immense height. The last of these near Diwáli falls from a table-land which must run up close to Nanda Devi over ledges of slate rock. The encamping-ground at Diwáli stands in an angle where the Pindar receives on its left bank the Kushini or Kuphini river. Their waters are of a dirty milk colour in the rains, and the bed of the combined stream is obstructed by some great boulders, against which it dashes with great force. The vegetation on the road from Kháti comprises great clumps of the *Arundinaria falcata* (ningál), and all those near Kháti (q. v.) except the *Quercus incana*; to these may be added the elm (*Ulmus crass*) called *shumbarmaya*; *Juglans regia* (shor); *Cerasus cornuta* (jumuna); *Spiraea Lindleyana*; *Leycesteria formosa* (hulauliya); *Hippophae sulcifolia* (dhár sháh); *Ampelopsis Himalayana* (chhapara); the arborescent *Hydrangea* (bhu-chatta); the hazel (*Betula badam*); *Corylus lacera* (kapáti); *Piptanthus nepalensis* (shalgari); the red and black currants, *Ribes glaucum* and *acuminatum*, known as *hohulige*; *Berberis*

Walli chii, and the silver fir, *Abies Webbiana*, which is common above Diwál and is known as *rágha*. The undergrowth consists of *Strobilanthes* (balsame), *Rubus*, *Cucumis Himalensis*, *Cuscuta verrucosa*, *Polygonum runcinatum*, *molle* and others. *Oxyria elatior*, *Tricholepis nigricans* (Edge), *Senecio nigricans*, *alata*, *canescens* and *chrysanthemifolia*; *Aster ferrugineus* (Edge) and *alpina*; *Junia Royleana* and *Jussilugb* are very abundant on the rubble.

Dol, a village in patti Mahryúri Dolphát of Kumaon, is situate in north latitude $29^{\circ}-29'-30''$ and east longitude $79^{\circ}-48'-25''$, on the road between Almora and Devi Dhúra. It possesses a former traveller's bungalow on a site 6,022 feet above the level of the sea. The stages now are Lamqarha, five miles west of Dol and nearer Almora and Mor-naula, six miles east of Dol and nearer Devi Dhúra. Dol itself is a pretty hamlet on the spur below the bungalow; still further down, in the various glens to the east, are scattered the villages of Sálam, celebrated for their excellent rice. A little north of the bungalow rises the eastern branch of the Kúmniya river with the road to Almora, on its right or eastern bank. Three *kos* from this, at the junction of the south-eastern or main branch, stands the rather famous shrine of Kapleswar, with a large temple dedicated to Mahádeo, built by Udit Chand, son of Baz Bahádur, on the north bank, at the supposed spot where the sage Kapila did penance, and where across the junction Seshnág, the serpent king, was similarly engaged. There is scarcely a confluence of two streams in the mountains where Mahádeo is not worshipped. The present site is a narrow, pine-clad glen, just at the end of the cultivated lands; a mile lower down, the Kúmniya forces its way amidst great smooth boulders of granite, the débris of the mountains above; here, on its south bank, facing Raulakot, is a huge outburst of granitic masses, piled one over another to the height of 150 feet; the highest and most external, shaped like the beak of an anvil, is known as the Birdeo—(Madden).

Domaila, a village and halting-place on the route from Kainúr to Rámngar, is situated in patti Khátali of parganah Malla Salán in Garhwál, in latitude $29^{\circ}-50'-30''$ and longitude $79^{\circ}-4'-10''$, distant 7 miles 5 furlongs 23 poles from Gyúnlád on the Kotdwára road, 6 miles 3 furlongs 28 poles from Baijirau, and three miles and-a-half from Bhatwára, the usual encamping-ground south of Baijirau, under which the stage is described.

Dora Malla, a patti of parganah Páli Pachháon in Kumaon, is bounded on the north by pattis Walla Giwár and Kairáran; on the west by pattis Bichhla and Talla Dora; on the south by patti Athágüli Palla, and on the east by the same patti and Kairáran. This patti was formed from Dora Malla and a portion of Dora Talla at the recent settlement. The drainage runs south-east by the Riskoi-gadh, a tributary of the Gagás. The principal village is Dwárahát (*q.v.*), from which roads branch off to Bágewar by Someswar, to Lohba by Ganái, to Srínagar by Mási, and to Ránikhet and Almóra. The whole patti is very highly cultivated, but at the same time is remarkably devoid of forest, low and hot. Other villages of some importance are Banoli, Hát, Kotila, Kaháli, Suluna, and Mirai Purainiya. The statistics of the Malla Bichhla and Talla pattis may be shown thus:—

Dora.	ASSESSABLE AREA IN BUSTS.				ASSESSMENT IN RUPEES.				POPULATION.	
	Total.	Cultivated.		Culturable.	1815.	1820.	1842.	Current.	Males.	Females.
		Irrigated.	Dry.							
Malla ...	2,956	20	3,397	549	615	1,360	1,301	2,708	2,344	2,094
Bichhla ...	3,785	62	3,294	428	1,503	2,307	2,217	3,629	2,717	2,631
Talla ...	4,963	96	4,190	676	1,151	1,730	1,801	3,915	3,405	3,015

The land-tax falls on the total assessable area in the Malla patti at Re. 0-14-8 per acre, in the Bichhla patti at Re. 0-10-4 per acre, and in the Talla patti at Re. 0-12-7 per acre: the incidence on the cultivation is Re. 1-1-11 per acre in the Malla, Re. 1-1-4 in the Bichhla, and Re. 0-14-7 in the Talla patti. There is a school at Hát. The patwári resides at Dwára.

Dora Talla, a patti of parganah Páli Pachháon in Kumaon, is bounded on the north by Talla Giwár and Walla Giwár; on the west by the former patti and Walla Nayan; on the east by Bichhla Dora, and on the south by Silanr Talla. Patti Dora Bichhla was separated from Talla Dora at the recent settlement. This patti comprises the elevated tract drained by the Masarín and Bahwa torrents, tributaries of the Gagás. The principal villages are Dúngarkhola, Bajan, Khanoliya, Bhanyúti, Takákti, Dhumerha,

Rhikárb, Surál, Sananai, and Báonli. The Balwágadh, a tributary of the Gagás, forming the eastern boundary, drains this patti on the east and the Gagás itself on the south. The statistics will be found under Dora Malla. Three villages were transferred to the Malla patti at the recent settlement. The patwári usually resides at Jálali, where there is a school.

Dora Bichhla, a patti of parganah Páli Pachháon in Kumaon, is bounded on the north-west and west by Talla Dora; on the north-east and east by Malla Dora; and on the south by Athágúli Palla, Silaur Malla, and Talla. This patti was formed from Talla Dora at the recent settlement, and its statistics will be found under Dora Malla. The principal villages are Bhatkot, Bitholi, Bedhúli, Busera, Erha, Asguli, Kande, Chhatgúla, and Semalgáon. It is watered by the Bhaiáráo and Riskoi, both tributaries of the Gagás, which flows along its southern boundary from east to west. Three villages were received from Silaur at the recent settlement. The patwári usually resides at Asguli, where there is a school.

Doti Mallí, a patti of parganah Phaldákot in Kumaon, is bounded on the north by Athágúli Walla and Silaur Walla; on the west, by Kákalaśaun Walla and Chauthán; on the south by the latter patti and Dhúraphát; and on the east by patti Chaugáon. Six villages were transferred to, and three were received from, Chaugáon at the recent settlement, and one each from Kosyán Malla and Silaur. Doti Mallí occupies the valley of the Kúchgadh, a tributary of the Kosi river. The principal villages are Baina, Manári, and Pánde-kota. The assessable area comprises 1,256 *bets*, of which 219 are culturable and 1,036 are cultivated (two irrigated). The land tax yielded Rs. 577 in 1815, Rs. 705 in 1820, and Rs. 779 in 1843. The existing assessment amounts to Rs. 1,156, which falls on the total assessable area at Re. 0-14-9 per acre, and on the cultivation at Re. 1-1-10 per acre. The population at settlement numbered 2,295 souls, of whom 1,199 were males. The patwári usually resides at Chápar.

Dúg, a patti of pargannah Dánpur in Kumaon, is bounded on the north by Dánpur Malla and Ná-kúri; on the west by Katyúr Talla; on the east by Ná-kúri and Kamsyár; and on the south by the latter patti and Kharáhi. Dúg received one village from Kharáhi, 29 from Katyúr Talla, and eight from Dánpur Talla at the recent

settlement. It occupies the valley of the Pungárgadh from Sisani, by Maugáon, Chaur, and Dūngari to its confluence with the Sarju on the left bank, a little north of the confluence of the Lahor river on the Bágeswar and Kháti road. The principal villages are Junail, Dhapti, Mandalsara, and Parhoi. A fair path leads along the Pungár valley to the east. The assessable area comprises 2,732 *bísas*, of which 1,295 are cultivated, 683 irrigated, and 1,437 are culturable. The land tax, in 1815, yielded Rs. 227 ; in 1820, Rs. 330 ; in 1843, Rs. 557, and now gives Rs. 2,117, which falls on the total assessable area at Re. 0-12-5 per acre, and on the cultivation at Re. 1-10-2 per acre ; 196 *bísas* are held in *gúnth* and 47 are free of revenue. The population at settlement numbered 1,075 males and 855 females. The patwári usually resides at Aneriya, where there is a school.

Dúgli, a halting-place on the route to the Pindari glacier in parganah Dánpur of Kumaon, is distant from Diwáli about five miles : the rise is gradual and continuous along the left bank of the river, which about two miles from Diwáli becomes one series of rapids and cataracts rushing among and over brick-coloured boulders.

The Pinder flows at a depth of 150 to 300 feet below Dúgli, whence and indeed from the glacier its course towards Diwáli is nearly straight from north to south. On the right bank of the river, there are four or five fine cascades fed by the snow and falling over the bleak bare rock above the line of vegetation in copious sheets of spray. On the left bank, the cliffs and shivered pinnacles are more remote and rise from a tract of undulating ground, strewed with great rocks and covered with forest and brushwood. Two miles from Diwáli, a hut and grazing-ground, called Ten Pachuri, is met with, a little to the east of which, a superb cascade falls from the height, in three distinct leaps. Approaching Dúgli, the glen narrows, and the wild crags and bluffs on the right bank of the river appear only a few hundred yards distant. A cave or *uliyar* here affords a good shelter in storms ; height estimated at 11,500 feet. The vegetation towards Diwáli comprises the trees mentioned under Diwáli with silver fir (*Abies webbiana*), birch (*Betula bhojpatra*), *Rhododendron arboreum* and *barbatum*, maples, *Viburnum nervosum* and *cotinifolium*, *Rosa webbiana*, and *sericea* (*sephala*, Bhot), *Berberis brachystachys* (Edge), *Jasminum revolutum*, *Syringa emodi* (*ghiti*), *Lonicera obovata* and *webbiana*, several willows, the red and the white fruited mountain-ash, *Pyrus foliolosa* (*sáhiya*, *káhiya*) and extensive thickets of *R. campanulatum*. The pasture and streams abound with Alpine plants, such as *Spiraea hametshatika*, *Cynoglossum uncinatum* (*Adra*), *Aplataxis aurita*, *Carduus heteromallus* (*sum kaniaw*), *Suertia perfoliata* (*siawriya*), *Cyananthus lobatus*, *Impatiens meschata* and *gigantea*, *Rhodiola imbricata* (Edge), *Saxifraga parnassiaefolia*, *Callitha himalensis*, *Eleocharis polystachya*

and *strobilifera*, *Pedophyllum emodi*, *Salvia moorcroftiana*, and *Delphinium vestitum*. At Dúgli, the *Potentilla atrosanguinea* (bhui kaiphal) commences, and is common towards the glacier, and near the latter only occurs *Aconitum heterophyllum* (at+).

From Dúgli, the base of the Pindari glacier, distant about four miles, is reached in about two hours: the ascent very gradual and for the most part over sloping lawns, bounded on the east by high crags and covered with *Geranium Wallichianum*, *Potentilla atrosanguinea* and other species, *Ligularia arnicoides*, *Morina longifolia*, *Primula glabra*, *Paraorchetis communis*, *Cyananthus*, *Saxifraga spinulosa*, *Polygonum brunneis*, and others, *Sibbaldia procumbens*, *Ephedra Gerardiana*, several species of *Gentian* and *Pedicularis*, &c. The only bushes beyond Dúgli are the *Rhododendron campanulatum*, *Lonicera obovata*, willow, birch, rowan, all diminutive and ceasing wholly about a mile short of the glacier, except the juniper and the *Colemeaster microphylla*, both of which flourish on its edges; the latter hardy little shrub seeming equally at home here as on the hottest banks at Almora. The west bank of the Pindar is precipitous for about two miles above Dúgi, where a cave is pointed out, said in days of yore to have been tenanted by Bhíma, the Pándava; not, however, till after the manner of St George and St. Patrick he had expelled and slain certain dragons and serpents, the original occupants. Above this cave, the right bank also becomes undulating, and exhibits the trace of a road which formerly led to the glacier, till the bridge was carried away, the slopes then are covered with low thickets probably of *Rhododendron lepidotum*. In the north-west Himalaya, the passes, contrary to the fact here, are all gained by the north-west banks of the streams, here in general by the south-east (Madden, J. A. S. Ben. XVI. 226.)

Dúng, a halting-place in patti Malla Juhár, of pargannah Juhár in Kumaon, lies on the route from Milam to the Unta-Dhura pass into Tibet, 144 miles north-east of Almora, about four miles south of the crest of the pass and eight miles from the next camping-ground. There are no houses at Dúng, but merely an indifferent encamping-ground close to the junction of the Ganka and Laser, two glacier streams descending during summer in a southern direction, and which form the eastern branch of the Gori. Even firewood must be brought from three miles lower down to the southward: elevation above the sea, according to Barron, 15,450 feet; Strachey, 13,700; Great Trigonometrical Survey, 13,720; north latitude $30^{\circ}3'$; east longitude $80^{\circ}14'-30''$.

Dungari, an encamping-place in Jaunsár, 14 miles from the junction of the Tons and Pábhari and 13 miles from Mendráth. The old track from the former place keeps for some time along the course of the river very rough and winding until reaching a smaller stream, it strikes up the glen and crossing it a little way up ascends the opposite hill. The range here ends on the river in a remarkable peak, which is marked as a melon with deep indentures

vertically cutting its bulged conical sides. Hence the path hangs above the river, and is very steep and precipitous. Further, a deep descent to a small valley and afterwards a series of ascents lead to Dúngari. The prevailing rock is limestone; blue and white-veined sandstone and ferruginous rocks are also to be found. In many places all these stones mingle in one huge mass, as if they had been melted down together, suggesting the likeness of marbled paper; much calcareous matter is found binding this mixture, and settling on it in masses closely resembling hard mortar as it is detached from old buildings, full of small stones and gravel bedded in its substance: these masses are perfectly amorphous, and, with the mortar-like substance of rock attached to them, it seems as if, when the whole had melted, the hard parts had settled downwards, and that this, like dross, had remained floating at the top. (*Fraser.*)

Dúngari, a village in patti Pindarpár and parganah Badhán of British Garhwál, also a resting-place on the route from Almora by Baijuáth to Nandprayág in the tract locally known as Sol patti, is distant 11 miles from Bánjbagar and 10 miles from Jolabagar. The road hence to Bánjbagar ascends the northern face of the Máníl hill and enters a magnificent forest of *tilonj* (*Quercus dilatata*), oak interspersed with cypress and fir. The undergrowth is composed of a species of bambu known as *ringál*, which affords refuge to herds of wild-pig, *thár*, *jardu*, *sardú*, and other kinds of deer. The road thence passes along the southern gorge of the Koara peak (10,990 feet high), amid the same kind of forest interspersed with glades covered with grass. At the summit of the pass there is a morass containing a little water and known as Súkha Tál, where water-fowl are occasionally met with. To the west, the road descends gently down the valley of the Chajauligadh and passes Baingoli on to Bánjbagar, where there is a charming encamping-ground in a glade of the forest and by the river. There are several other places in the forest used as encamping-grounds by the Bhotiyas, which would form admirable head-quarters for the sportsman, painter, or naturalist.

Dwárahát or Dorahát, a village and resting-place on the route from Almora to Garhwál, lies in latitude 29°-46'-54" and longitude 79°-28'-8" in patti Malla Dora and parganah Páli of the Kumaon

district, 13 miles from Bhainskhet, 27 miles from Almora, $9\frac{1}{2}$ miles from Ganāi, and 12 miles from Rānikhet. The elevation of the travellers' bungalow (chimney) above the level of the sea is 5,031 feet according to the Great Trigonometrical Survey records. There is here a shop for the sale of grain, a travellers' bungalow (without cooking utensils), a post-office, school, and dispensary. Dwārahāt in former days was the residence of one branch of the Katyūri Rājas, an outlying district of the kingdom of which Lakhanpur near Ganāi and Bhatkot was the head-quarters. The remains of very many ancient temples lie scattered in groups and lines over the fields. They are of the usual pyramidal form ornamented with from three to five rows of a simple moulding on the outer edges and adorned by an ornament resembling a Turk's cap. All are more or less in ruins and are now used as granaries and straw-lofts. Having been desecrated by the Rohillas (Ruhelas) during their invasion of this part of Kumaon, they are no longer held in reverence, and in many places the stones of the temples and carved pillars are made use of to mend the terraces of fields. Some of the pillars contain in a panel two rude figures with arms stretched out at right angles to their body, resembling a badly-made rag-doll. All the temples are of plain construction with the exception of one near the Syāldē Pokhar, by a clump of date-trees and an old *silan*. This is elaborately carved with row after row of figures representing gods, men, elephants, &c. It is, however, in bad repair, and its graven images and stones lie scattered around. The Syāldē tank, close by, produces large numbers of the pink lotus during the rains. It is so called from the Syāldē (Siyāldē) clan of Rajpūts who assemble here annually in Baisākh to indulge in the mimic warfare of the *bagwālī*. Formerly it was customary to use slings and stones, but this has been forbidden owing to the occurrence of serious accidents. The remains of the entrance to the temple still exist of a cruciform shape; whilst the shrine itself is about seven feet square. The whole consists of three broad abutments connected by three narrower: the fourth side forming the entrance. The inner sides of each abutment join together to form the adytum. The outer side to about three feet displays a moulding, then comes several rows of figures in relief and panelled, and the upper row in panels contains figures fully two feet high. The friable nature of the

stone employed as well as exposure to the rain has rendered the original delicate carvings obscure. Even such as it is, the remains, some 17 feet high, are worthy of being preserved, though many of the stones have been removed for the buildings in the neighbouring bazaar. To the north-east is the Dúnagiri or Dronagiri hill; to the north Nágárjun; to the east an eminence called Chandragiri and by the people Chanchári; to the south the Dharmagrām; and to the west the Búngagrām. The palace of the old Rájas was built on the rock called Tharp on the Chandragiri hill, where it is said the Katyúris used to cut off the hair and noses of prisoners.

Just below the palace the bazaar commences, and at the end of it is the Mritunjaya temple with a broken pinnacle, west of which is the Badrináth temple, the most important of those now in existence. It comprises three of the older

Badrináth.

temples surrounded by a courtyard in which is a Dharmśála or resting-place. Many stories are told about the principal temple: one that I was expected to believe was that at its erection a sixth workman was always visible, though five only were employed. From Dwára, westward, all the principal temples are ascribed to Sankarácarya, and those here form no exception. The principal temple¹ dedicated to Badrináth is about 50 feet high ending in a truncated circular ornament open at the top. The old image was desecrated by the Rohillas, and the new one is of modern make and is surrounded by 10 or 12 others, one of which bears the date 1105 Saka or 1048 A.D., and on another representing Ganesha is the date 1103 Saka. The image of Lakshmi is in a small temple to the north, near which is a ruined temple known as Unerdewal. A great pipal tree now grows out of a crack in the walls near the Dharmśála. Two of the rest-houses were built by the Chaudhris and another by Dámu Sonár. The temple of Mritunjaya has been deserted, the people say, because strange voices were heard within it, but really because the establishment cannot afford to keep up the worship. The Doms have a temple dedicated to the worship of Kálsain.² Sítala Devi is worshipped in another near the Syálde Pokhar, where a fair is held on the Bikh Saukránt, in April. The Kot-Kangra Devi is the *Kula Devi* of the Chaudhri family, who emigrated hither from

¹ This is under the Rawal of Badrináth in Garhwál, who arranges for the services.

² Gazetteer, XI. 831.

Kangra in the time of the Rájás and were largely employed by them in civil duties. Her temple is on the north side of the tank. The Chaudhris themselves live in Haripura, and employ the priests of Sítala as *pujáris*. Brahm Deo and Dham Deo, the Katyúri Rájás, are also worshipped here.¹ There is a platform or *chabútra* erected by the Chaudhris, but now owned by the State; and several partly-finished temples near the tank and a group of seven in the cultivated fields called Ratnadewal, but none have any idols in them, and their origin is unknown. In the upper bazaar is a temple to Mahádeo in ruins, the image having been removed to the Badrináth temple, and near it three others, one of a circular form with a verandah. Towards the Tharp there is a row of temples with pillared entrances called the 'Court-temples' (*Kachari-ki-dewal*) all used as wood and hay stores. Above them are two other temples and the school established in 1857.

A flight of steps leads up to the Tharp-tilah, where there is a temple now devoted to the worship of the village deities² Haru,

Látu, &c., adorned with iron lamps at each
Tharp. corner and two four-branched lamps of the

same metal; whilst an iron spade and a number of scourges are placed in the room, and on festal occasions the persons possessed by these gods dance, and whilst in a state of frenzy from their exertions are supposed to reveal the future. Below the Tharp is a noted temple of Kálíka Devi, to which the people have recourse when any illness is abroad. The temples altogether number 30; but with the exception of those dedicated to Badrináth, Kedárnáth, Sítala, Kot-Kangra Devi, and Kálíka Devi, few are used for religious purposes. A portion of an inscription has been carried from Dwára to Dúnagiri, bearing date 1105 Saka (1029 A.D.), and the early part of the 11th century may be taken generally as the date of the erection of the principal temples in Dwara itself. At the celebration of the Dasahra, a considerable fair used to be held at the old temple on Dúnagiri, where religion and commerce went hand in hand, and sins were washed away and new garments purchased. Trade has since found other outlets, whilst religion is not now-a-days a sufficient inducement to undergo the toil of climbing to the aerial residence of the god.

¹ Gazetteer, XI. 231.

² *Ibid.*

Dúnagiri or Dronagiri is composed of blue clay slate, with some quartz apparently rising towards Bhadkot. In the same direction as the gneiss, towards the eastern base of the mountain, there is a great deal of red ochry soil, probably arising from the disintegration of the slates and quartz. Dúnagiri, as seen from Dwára, is a fine saddle-back mountain, its easy slopes covered with woods and clumps of *búnj* (oak), interspersed with spacious glades of meadow. The summit may be about two miles distant from the bungalow, and is continued far to the north-west in a range of nearly equal elevation. In a pretty cultivated dell, along its south-west side, flows the Kothlár Nadi, of which the source is at Dwára : from Dúnagiri, the road to Lohba and Badrináth follows the course of the Kothlár towards the Rámghanga, beyond which appears the lofty range called Duda-ki-toli attaining above 10,000 feet elevation ; another road leads *via* Páli to Srinagar ; there is also a route, though a bad one, to Kakari-ghát near Manars, on the Kosi. (*Madden.*) Traill mentions the existence of tombs substantially built of large tiles at Dwára, which he considers are memorials of the Mughals located there in the course of Timur's invasion of Hindustan. In support of this theory are the groves of the common date palm (*khujá*) only planted by Musalmáns¹ in India and the foreign names of several villages and local subdivisions here. There are now no Musalmán inhabitants, the people of importance being descendants of decayed official families of Hindu origin, most of whom assume the affix "Chaudhri" or headman as a title of respect.

Taking the road from Bhainskhet, it winds up the hill to the west, by the villages of Rankhil and Baryúr, and passing between the peaks of Dhlrwa (4,512) on the south and Málkot (4,994) on the north crosses the Kauriya by a wooden bridge near the village of Kaphalna, and thence winding amongst bare hills crosses the Gaggá stream by a bridge at the village of Bám-níl sera in latitude 29°-43'-30" and longitude 79°-32'. Thence it again ascends in a north-westerly direction through the villages of Bagwáli Pokhar and Bhandargáon, until it joins the road from Ránikhet and Naini Tál by the village of Bhaunra. Here the road ascends the valley between the Kabáli (4,311 feet) peak on the west and the Chanchárl on the east, to the water-shed between the Kosi's tributaries and those of the western Rámghanga. Close to this the bungalow is built, surrounded by the villages of Hát Bahmanpurí, Dairi, Bijalpur, Káládák, and

¹ Gazetteer, XI. 5, 12.

Phémkiya. To the east a peak rises to the height of 5,031 feet. Hence road branch off for Páori by Mási on the west and by Someswar to Baijuáth on the east. The Karnprayág road follows the valley of the Kothlár-gár in a direction north north-west to Ganáí on the Rámanga, passing by the blue-slate quarries and iron mines of Chiteli on one of the spurs of Dánagiri on the right. The road from Bhainskhet is hot and low, passing through a richly cultivated country almost entirely devoid of trees or shade of any kind.

Dwársaun, a sub-division of parganah Barahmandal in Kumaon, lies to the south of the road from Almora to Ránikhet. At the recent settlement it contained an assessable area of 812 *báis*, of which 595 were cultivated and 217 were culturable. The land-revenue, in 1815, amounted to Rs. 193; in 1820 to Rs. 208; in 1843 to Rs. 216, and is now Rs. 645, which falls at Re. 0-12-9 per acre on the total assessable area, and at Re. 1-1-4 per acre on the cultivation. The population at settlement numbered 1,402 souls (674 females). The patwári usually resides at Dandgalya, where there is a school.

Fatehpur Talla, an encamping-ground on the route between Kotdwára by Khátali to Kainúr (Kanyúr) is situate in patti Sila of parganah Talla Salán in Garhwál, distant 10 miles 9 poles from Kotdwára and 11 miles 7 poles from Maidi, the next stage. The road from Kotdwára gently ascends the left bank of the Koh river to the Do-gadh stream, 8 miles 2 furlongs 24 poles, where it branches off to the north-east to Fatehpur, 1 mile 5 furlongs 25 poles. From hence to Maidi the road continues to ascend by the Bhalás-khál across the Dewál-khál or pass 3 miles 6 furlongs 29 poles to Gúm-khál, 2 miles 5 furlongs 33 poles. Hence a descent leads by Tilsiya-dhár to the Kúlárgárh 3 miles 0 furlongs 7 poles in the Maidi valley. The Kulwari-gadh is then crossed, and the Maidi river, the encamping-ground lying a little east of its confluence with the Nyár on the left bank of the latter stream.

Gágar or Ghágar, a lofty mountain range forming the most southern brow of the Himálayan system, is situate to the south of the Kosi river from Mohan eastwards. It extends in a direction nearly from north-west to south-east for about 35 miles in length, with an average breadth of probably 10 to 12 miles. Commencing on the east we find on the eastern boundary of patti Kosyán Talla the Sonchaliya peak attaining an elevation of 8,504 feet; to the south-east lies Badhán-Dhúra (8,408); further east a peak rises to 8,244 feet, and still to the east Badhantoli has an ele-

vation of 8,612 feet. The main ridge still running slightly south-east takes a sudden bend south by Bináyak (8,186 feet), in latitude $29^{\circ}-26'-52''$, longitude $79^{\circ}-27'-50''$, and thence again south-east to China (8,568 feet) at Naini Tál. To the north-west of China, a ridge stretches out west to the Dabka river, of which, a peak to the north of the village of Mahraura, attains a height of 7,403 feet. Though the most southern range of the great Hinálayan system, and the most remote from the line of greatest elevation, it exceeds in height most of the ranges which intervene. This circumstance has been pointed out by Herbert. "On each side of this line (that of greatest elevation), to the north as well as to the south, the peaks diminish in elevation, yet not equally. To the southward the decrease is more rapid, and is accompanied by an anomaly which is sufficiently striking. The diminution of elevation, which is pretty regular till near the boundary of the plains and mountain-land, is there suddenly interrupted. The peaks shoot up considerably above the mean elevation of those immediately north of them, and as suddenly sink into the plains; so that if we divide the country south of the line of greatest elevation into five parallel zones, the fifth will be as high as the third, while the fourth will be found considerably lower than either." Its rock formation is gneiss throughout, "characterised (1) by its small proportion of feldspar; (2) by the predominance of talcose or argillaceous ingredients; (3) by the singular types under which it sometimes appears, or, in other words, its transition into very anomalous rocks. It is of a schistose, rather than a slaty structure; has a talcose aspect, varying in colour from a greenish to a yellowish grey, soft though tough, and of that peculiar composition which entitles it to be called gneiss, though of so small a grain as to occasion the separate ingredients to be not easily recognisable. Besides the feldspar and talc it contains quartz, and occasionally hornblende. The strata of which the Gágas is composed dip very regularly at some points, varying between east and north, the inclination generally very small, though sometimes as high as 40° . The Gágas range is also known as Gargáchal, from the legend that the Rishi Gargá once resided near the Gágas fort.

Gágas, a stream rising in patti Kairáru of parganah Barahmandal in Kumaon near Dúnagiri, in latitude $29^{\circ}-49'$ and longitude

79°-30', flows nearly due south through that patti. The road from Dwárahát to Someswar crosses it at Bhataur in Kairáru and the road from Bhainskhet to Dwárahát by a wooden bridge near Bánsuli-sera. Here the channel is broad and thickly strewn with boulders, which give evidence of a considerable volume of water in the rains. Hence the course is nearly due west through Athá-gúli, where it receives on the right bank the Chandás stream and further west on the same side the Riskoi river and the Balwagadh from the north, and pursues the same course until it joins the Rám-ganga (western) on the left bank at Bhikiya-ki-sain, in latitude 29°-42'-8" and longitude 79°-18'-20". The stream is locally connected with the name of the Rishi Gargá.

Gagwársyún or **Gangawársyún**, a patti in parganah Bárabsyún of British Garhwál, is bounded on the north, by Idwáfsyún and Nádalsyún; on the south, by patti Manyársyún; on the east, by the Nádál, Paidúl, and Patwal pattis, and on the west, by the Siton and Banel pattis of the same parganah. The name is usually pronounced Gagwársyún. The population in 1881 numbered 3458 souls, of whom 1795 were females. In 1834 the village of Dewar was transferred to patti Sitonsyún. The táhsildár residing at Páori collects the land-revenue of this patti, which amounted to Rs. 1309 in 1884. The principal villages are situated in the upper valley of the Randi Nadi, and are Gagwára, where there is a school, Pündori, Dháng, and Negiána.

Gála, a hamlet and ridge on the borders of pattis Byáns and Chandáns in parganah Dárma of the Kumaon district. The hill is called Nirpániya-dhúra by the people of lower Kumaon from the absence of water. The eastern extremity where crossed by the road is sub divided by two shallow ravines into three minor ridges, which differ little in height, and may be 3,000 feet above the village of Gála, or about 10,000 feet above the level of the sea. The descent hence to Golam-lá is about 3,000 feet down a narrow and steep path, looking rather precipitously into the bed of the Káli several thousand feet below.

Gamsáli, a village in the Malla patti of parganah Painkanda in British Garhwál on the route from Joshimath to the Niti pass, 15 miles south of the latter, in latitude 30°-44'-45" and longitude 79°-52'-35", at an elevation of 10,317 feet above the level of the sea.

It is situate in the angle on the right bank of the Dhaulī (western), where the river flowing southwards is joined by a glacier torrent from the north-west, and passes from a deep ravine bounded on each side by enormous precipices of gneiss and granite into a picturesque and well-wooded glen. Gamaáli is the third largest village in the Níti sub-division of the Bhotiya maháls (*q.v.*). There is a village school here during the summer months. A quantity of flat land round the village bears crops of barley, buckwheat, and oats. Immediately behind the village, the mountain rises in an almost perpendicular cliff to a height of several hundred feet, while, on the opposite side of the smaller stream, the cliffs are of the same description: so to the north-west, the eye runs up a valley filled with huge boulders of granite, and rests on endless snowy peaks. To the south, is an open valley containing other villages and fairly-timbered, much resembling a valley in the north of Scotland. In May, when visiting this place, avalanches kept falling every afternoon about every quarter of an hour in all directions. From a spot between Gamaáli and Bampa, which is a mile to the south, looking up at a snow ridge to the south-east and about three miles off is to be seen to all appearance the upper half of the figure of a man, the head and shoulders being distinctly visible. The people state that they believe it to be an idol that had been placed there in olden times; but as no human being can now get up to the spot, it is improbable that their story has any foundation. It is more likely to be a bit of rock jutting above the snow bearing some similitude to the human figure, which it certainly has. Scented violets; iris, blue and purple; yellow, white, and red dog roses; wild currants and gooseberries are to be found all over the valley round Gamaáli.—(GARSTIN.)

GANÁI, a halting-place on the Rám-ganga river, on the route between Dwára in Kumaon and Lohba in Garhwál, is situate at an elevation of 3,206 feet above the level of the sea, in latitude $29^{\circ}53'4''$ and longitude $79^{\circ}23'-38''$ in patti Giwár and parganah Páli of the Kumaon district. There is a travellers' bungalow here, distant 10 miles from Dwárahát, three miles from Rámpur, and 14 miles from Lohba; from Dwárahát the road follows the right bank of the Kothlár-gar to its confluence with the Rám-ganga at Ganái. This stream flows through a wide cultivated valley having numerous villages. On the right are the Dúnagiri (7,346) and Sukhdevi

peaks, and continued to the west, in the Munpaudevi (6,932) and Godi peaks, to the banks of the Rám-ganga. To the left and south of the road the range consists of the Dwárakot (5,356), Dalgári (5,922), and Bastira peaks, and the valley is here wider and the slopes less precipitous. The road passes by the villages of Chiteli, where there are quarries of blue slate and iron mines, Bireti, Mehalchaura, Chháni sometimes called Chháni semal from a *semal* tree of great size, standing near the village and Mahatgáon, to Rámpur. The old road leads to a ford on the Rám-ganga, which is passable except in the rains. At Ganái there is a bridge. The village is situate at the intersection of the valleys of the Rám-ganga running from north-west to south-east, and that of two of its tributaries, one running from the north-west (the Khetsár) and the other from the south-east (the Kothlár). The country around is highly cultivated and dotted over with numerous villages. The road is prettier and the hills better wooded than the stages near Almora; about three miles to the north-east is the Tarág Tál, a pretty lake embosomed in mountains. Some two miles from Ganái, are the traditional remains of what is now known as Lakhanpur or Bairát, and which is supposed to have been one of the capitals of the earlier Rájas in Kumaon.

Gangoli, a parganah of the Kumaon district, is in form somewhat of a triangle, with its apex to the south at the junction of the Eastern Rám-ganga and Sarju. The former river separates it from Síra and Shor, on the east, and the latter divides it from Chaugarkha on the west; on the north, the boundary is formed by a range of hills stretching from Bágeswar, on the west, to Naya Thal on the east, and separating it from Dánpur. The range is marked by numerous peaks over 6,000 feet high, amongst which may be noticed Bāsuk-nág, Káli-nág, Beni-nág, and others. The parganah now comprises six pattis—Bel, Bherang, Baráun, Kamsyár, Pungarón, and Athgáon—each of which is separately noticed. Four of these were created or first recognised in 1812, and Bherang was formed at the recent settlement. The assessment of the land revenue at each settlement (exclusive of mines) was as follows:—

1815.	1817.	1818.	1820.	1823.	1828.	1833.	1840.	Current.
Ra.	Ra.	Rs.	Ra.	Ra.	Ra.	Rs.	Ra.	Ra.
1,717	1,918	2,011	2,558	3,065	3,298	3,469	3,641	12,944

! See Gazetteer XI. 453, 527, 536.

The current assessment falls at Re. 0-10-6 per acre on the whole area, and at Re. 1-9-8 per acre on the cultivation. The total assessable area comprises 19,646 *bists*, of which 10,081 are culturable and 9,565 are cultivated (3,379 irrigated). In 1822, the area assessed to revenue was only 3,127 *bists*, whilst 411 were held free of revenue, and 1,169 belonged to deserted villages. In 1824, cultivation reached 4,277 *bists* and culturable waste, to 3,197 *bists*. In 1840, the assessable area amounted to 15,933 *bists*, of which 7,742 were cultivated. In 1821 there were 393 villages paying revenue, and in 1823 the number was 435 (besides 37 *mudfi* and 53 *gánah* villages), and the deserted sites numbered 359.

In 1840, there were 758 villages held under 381 leases ; giving an average of about Rs. 10-8-0 for each lease and of six rupees for each hamlet. In 1870 there were 495 estates assessed to revenue, comprising 747 villages and only 13 deserted village sites. The population at settlement numbered 10,167 males and 8,853 females : in 1872 there were 12,114 males and 10,628 females, and in 1881 there were 14,185 males and 12,998 females.

The tenures in this parganah are chiefly *bháí-bhaunt* or *bháyahdra*. There were 19 thokdárs in 1880 ; but in most cases the dues of office were worth very little ; whilst the duties as purveyors and police on the high road between Almora and Pithoragarh were somewhat onerous. Bel occupies the lower part of the parganah from river to river and from Gangoli Hát southwards. Athgón and Kamsyár lie to the west, Baráon in the centre, and Pungaráon to the north. In Bel, the villages are scattered and few in number except on the table land around Gangoli Hát ; indeed the greater part of the entire parganah consists of high and steep ranges of hills, which afford scanty room for cultivation, and compared with the area there is little land fit for cultivation left. The land capabilities in Baráon are a little better than in Bel, and perhaps best in Pungaráon, which finds in the Bhotiyas ready purchasers for its surplus produce. In former years, Bel, Bherang, Athgón, and Kamsyár were covered with an almost impenetrable jungle, the haunt of numerous tigers. Owing to the Gorkhali policy of disarming the inhabitants, they were defenceless and were carried off at mid-day whilst working in their fields, and tigers were even known to break into houses at night and carry off the inmates.

Writing in 1831, Traill states that within the previous three years 373 persons had been killed by tigers in Gangoli; these, too, were natives of the place, whose names and residences were recorded. In 1840 Batten writes: "In some of the tracts near the rivers, notorious man-eaters are hardly ever absent, and at times the loss of human life is considerable; very few of the inhabitants are shikáris, and the reward of Rs. 10 given for each tiger killed is found an insufficient inducement to create in Gangoli a body of hunters; whilst the poverty and inhospitality of the villagers is such, that though they often apply for aid, they are almost always found unwilling to provide even the commonest supply of provisions for the local sepoys and armed peons occasionally sent to assist them."

The people of Gangoli have always had the reputation of being the most churlish, priest-ridden in Kumaon; and at the time of Mr. Batten's settlement they were in addition wretchedly poor, slaves of the Panta and Upretis, without any independence, and hardly having the spirit to aspire to a better position. Brahmanical influence has of late years very greatly diminished, and the existence of the Beninág tea-plantation has greatly aided in raising the people out of debt through the constant employment and good wages they receive there. Tigers have been exterminated, and the few that venture up the river are now quickly disposed of. Jungle has disappeared to a great extent, and cultivation has much increased; good roads, too, now run through this tract to Pithoragarh and Thal, and altogether it is expected that this parganah will make great progress during the current settlement by a yearly increase of cultivation and wealth. A comparison with the past gives good grounds for this hope. There are iron mines at Bájur and Gwánsikot in Athgáon. The copper mines at Rái have been separately noticed under "Mineralogy." In 1840 they were leased for Rs. 101 and Rs. 25 in 1872: there are also copper mines at Phadyáli, Bujoyrha, and Kutáni in Athgáon. The *gúnth* holdings are numerous, and aggregated 993 *bísís* in 1870: 164 *bísís* were *mudáfi* to individuals and 253 *bísís* in plots of less than 10 *bísís* were also held free of revenue, total 1,410 *bísís*. There were 125 water-mills assessed at Rs. 237. Bherang and Bel have one patwári, and each of the other pattis one. There are schools at Chaupata, Beninág, Titauli, Sugor, and Chamtola. The tea of Beninág and the oranges of the Rám-ganga

valley are favourably known. Every year a large fair takes place at Thal, where the Bhotiyas complete their accounts with the hill-traders and prepare to move northwards. Casual cultivation known as *tjar* or *kála-banjar* is still not uncommon. The temples of Káli at Gangoli Hát, Bhubaneswar with its cave¹ at Beninág and Rám-eswar at the confluence of the Sarju and Rám-ganga are some of the best known in the district. A Rája held his court at Ménkot for eight generations, and founded Gangoli Hát.² At Jamankot, a Páli immigrant set up an independent *rāj* for a few days, but was promptly suppressed.

Gangol, a patti of parganah Káli Kumaon in Kumaon, is bounded on the north by patti Rangor ; on the east by Sui Bisung ; on the west by Chálsi and Pharka ; and on the south by Sipti. This patti was separated from Sipti-Gangol at the recent settlement. The principal villages are Goshni, Kánikot, Parásann, and Tyársann. The assessable area comprises 1,827 *béts*, of which 622 are culturable and 1,205 are cultivated (146 irrigated). The land tax yielded Rs. 475 in 1815 : Rs. 683 in 1820 : Rs. 988 in 1843, and now stands at Rs. 1,458, which falls on the whole area paying revenue at Re. 0-12-9 per acre and on the cultivation at Re. 1-3-4 per acre. The population at settlement comprised 982 males and 809 females. Two villages were received from Regarubán at the recent settlement. This patti is fairly inhabited for its size, and possesses a good climate. There is still good arable land to spare, capable of affording fair crops of the millet *manduwa*. The patwári usually resides at Marlak: there is a school at Khet-khán.

Gangoli-Hát, a village, resting-place, and traveller's bungalow on the route from Almora to Pithoragarh, distant 34 miles north-east of Almora, 11 miles from Naini, the same from Báns, and about 18 miles from Pithoragarh, in latitude 29°-39'-23" and longitude 80°-5'-24", at an elevation of 5,580 feet above the level of the sea. The village itself is called Hát, and is situate in patti Bel of parganah Gangoli. It is reached from Báns by a steep descent to the Hám-ganga, which is crossed by an iron suspension bridge and leads to an equally steep ascent on the opposite side.

The hills on either side are thickly clothed with pine forest, and present magnificent views of the lower hill scenery in the Himálaya, and though the

From Báns.

¹ Gazetteer XL 318

² *Ibid.*, 496, 527, 537, 540, 797.

road is tiring and hot, the scenery well repays the labour. There are only a few hamlets near the road. Close to the bungalow is a temple dedicated to Káli, the priests of which make the usual boast that the ground is ever moist with the blood of kids and buffaloes offered in sacrifice. The temple is, however, more remarkable for the grove of noble *deodars* within which it stands. Close by, to the south-west are the remains of a few old temples and a masonry well bearing an inscription apparently of some age. From Naini to Hát the road following the Jágesar ridge, which separates the waters of the Alaknandi from the Sarju, soon descends steeply to the latter river passing the village of Harara, which is a little below

4,000 feet The lowest portion of the valley
From Naini. of the Sarju here is entirely uninhabited.

The river is crossed by a suspension bridge at an elevation of only 2,827 feet, and the climate and vegetation are therefore thoroughly tropical in their character. On the lower part of this descent, which faces the north and is very steep, and therefore sheltered from the sun, many showy flowered species of *Gesneraceæ* are abundant. A fine scarlet *Hedychium* may also be found near Harara. In the valley convolvulaceæ, wild gingers, and orchideæ are common, the latter usually rather curious than beautiful. Besides these Madden notes seven species of *Bæhmeria*, the *bijaura* (*Citrus medica*); *kunj* (*Toddalia aculeata*); *sún-kanwal* (*Laurus lanceolaria*); *kurra* (*Polygonum glabrum*), and many others. A great outburst of green stone occurs here, which has been traced almost right across Kumaon and Garhwál. The Sarju is here a fine clear river flowing in a succession of still, deep pools and sparkling rapids over a bed of boulders. The ascent to Gangoli-Hát is long and steep. The slope up which the road is taken has a southern aspect and is generally abrupt, open and grassy, and thinly clothed with pines. The chestnut, however, is common and is conspicuous in the autumn from its abundant bloom of white flowers; the fruit is small and worthless. *Lilium callichianum*, the queen of lilies, is abundant on the open slopes; it grows from four to six feet high, and its pure white flowers have been measured as much as thirteen inches in length; and nine inches is common. It flowers in August.

A road here branches off to Munsyári by Loha Thal; and during the hot weather and rains, though somewhat longer than the

ordinary road by Kapkot, has the advantage of being on the whole
 at a greater elevation, and is therefore cooler
 To Tejan. and more healthy. Gangoli-Hat to Bána, 10

miles, ascend the Diyári pass (6,910 feet) over a ridge, the highest point of which is called Rái, after the village of that name so well known for its copper mines.¹ The forest on this ridge is pine, and a visit to its summit, which lies about a mile west of the pass, would repay the labour. At the foot of the ascent *Quercus lanata* is common with its striking foliage. The road is easy and, crossing the pass descends to Rái, beyond which the path follows the water-parting ridge between the Sarju and the Rámanga at an elevation varying from 5,000 to 5,500 feet. The highest points of the ridge in this neighbourhood hardly exceed 6,000 feet and the country is open and fairly cultivated and easily accessible. There is nothing striking in the scenery nor in the vegetation which is that common at such altitudes. From Bána to Loha-thal, about eight miles, the road is easy, winding along the hill sides between 5,000 and 5,500 feet, through an open and rather interesting country. Hence to Mohargári, nine miles, the path ascends an open cultivated country to the summit of the Kálinág ridge (7,317 feet). To the north of this ridge the vegetation becomes more luxuriant, the mountains being steeper and the Mohargári valley almost devoid of human habitations or cultivation. After a steep descent reach the Mohargár or stream at an elevation of about 4,000 feet, and follow its northern bank through a semi-tropical vegetation to the encamping-ground which is close by the stream. Hence to Tejambugur (q.v.) about six miles.

Gangotri, in patti and parganah Taknaur of Tihri, a small temple on the right bank of the Bhágirathi, is situate in north latitude 30°-59'-10" and east longitude 78°-59'-30", about ten miles south-east of its source at an elevation of 10,020 feet above the level of the sea. A gunshot below Gangotri the Kedár Ganga, a rapid and considerable stream, debouches into the Bhágirathi at a place called Gaurikund, a place of ablution for pilgrims. The hills here recede a little, and above Gaurikund the bed of the Bhágirathi widens into a small shingly space, in which the river flows rapidly, changing its course as the floods direct it. Just at

¹ Gazetteer X, 279.

the gorge of this space a bridge has been thrown across, and just above the bridge, in a bay formed by a reach of the river in this shingly place, fifteen feet above the stream, is situate the small temple dedicated to the goddess Ganga. This was erected by Amr Singh, Thápa, the chief of the Gorkháli commanders in Garhwál early in the present century. The temple is erected on the sacred stone where tradition has it Bhágirath used to worship Mahádeo. It is a small building of a square form, for about 12 feet high and rounding in to the top in the manner common to temples in the hills. It is quite plain, coloured white with red mouldings, and surmounted with the usual melon-shaped ornament commonly known as a Turk's cap. From the eastern face of the square which is turned nearly to the sacred source there is a small projection covered with a stone roof, in which is the entrance facing east, and just opposite to this there is a smaller temple of similar shape dedicated to Bhaironji, as the guardian of the shrine. The larger temple contains small statues of Ganga, Bhagirath, and other deities supposed to be connected with the locality. The whole is surrounded by a wall built of unhewn stone and mortar, and the space this contains is paved with flat stones. In this space, too, there is a comfortable but small house for the officiating Brahmins. Without the enclosure there are a few wooden sheds constructed for the accommodation of pilgrims, who also find shelter in caves formed by overhanging stones, of which there are many.

Fraser writes.—“There are several pools, called by the names Brahmakund, Vishnukund, and others of corresponding import. Ablution in these is considered an important part of the ritual to be observed by pilgrims who visit this spot, considered popularly to be the source of the Ganges, as further progress up the stream is generally, though erroneously, regarded as impracticable. Though this ablution, with due donations to the officiating Brahmins, is considered to cleanse from all offences, the number of pilgrims is not considerable in consequence of the great length and ruggedness of the journey, and the difficulty of obtaining subsistence by the way. Flasks and similar vessels are filled at Gangotri with the sacred water of the stream, and being sealed by the officiating Brahman, are conveyed to the plains, where they are highly prized. Gangotri is below the upper limit of forests; *deodars* growing here, though to no great size, and birch trees thriving remarkably. The mean breadth of the Bhágirathi or Ganges here was ascertained by Hodgson, on the 26th of May, to be forty-three feet, the depth eighteen inches, the current very swift, and over rounded stones. On the second of June following, he conjectured its volume to be doubled, in consequence of the rapid melting of the snow.

Rennell's account of Gangotri would scarcely have been expected from one who usually displays so much information and judgment. "This great body of water (the Ganges) now forces a passage through the ridge of mount Himmaleh, at the distance possibly of 100 miles below the place of its first approach to it, and, sapping its very foundations, rushes through a cavern, and precipitates itself into a vast basin, which it has worn in the rock at the hither foot of the mountains. The Ganges thus appears to incurious spectators to derive its original springs from this chain of mountains, and the mind of superstition has given to the mouth of the cavern the form of the head of a cow

This idea is also mentioned by the Persian authors and Père Tieffenthaler also notices it; but the Brahman priest in charge met there by Fraser in 1816 ridiculed the idea of the stream proceeding from a rock like a cow's mouth, and pointed out the actual source. Herbert estimates the length of the Bhágl-rathi from its source near Gangotri to its entrance to the plains at 203 miles. The elevation of the temple above the sea is 10,319 feet. About a mus from Gangotri is a place called Patangani, which is noted as the spot where the five Pandawas remained for twelve years worshipping Mahádeo after his retreat from Lanka to the Himálaya after that they ascended the Swargaruini peak, whence the Ganges flows, and there four of them died and their spirits ascended to heaven. The fifth Yuddhishtira was translated bodily at the same time. Mr. Griffith thus recounts the birth of the Ganges¹ :—

"Thus urged, the sage recounted both
The birth of Ganga and her growth:
The mighty hill with metals stored,
Himálaya, is the mountain's lord;
The father of a lovely pair
Of daughters, fairest of the fair
Their mother, offspring of the will
Of Meru, everlasting hill,
Menú, Himálaya's darling, graced
With beauty of her dainty waist.
Ganga was elder born: then came
The fair one known by Uma's name,
Then all the gods of heaven, in need
Of Ganga's help their vows to speed,
To great Himálaya came and prayed
The mountain king to yield the maid.
He, not regardless of the weal
Of the three worlds, with holy zeal
His daughter to the Immortals gave,
Ganga whose waters cleanse and save,
Who roams at pleasure, fair and free,
Furging all sinners, to the sea,
The three-pathed Ganga thus obtained
The gods their heavenly homes regained.

¹ Ramayana, I, 171.

Long time the sister Uma passed
 In vows austere and rigid fast,
 And the king gave the devotee
 Immortal Rudra's bride to be ;
 Matching with that unequalled lord
 His Uma through the worlds adored.
 So now a glorious station fills
 Each daughter of the king of hills
 One honored as the noblest stream,
 One mid the goddesses supreme.
 Thus Ganga, king Himalayk's child,
 The heavenly river undefiled,
 Rose bearing with her to the sky
 Her waves that bless and purify."

Gau-mukh, or the cow's mouth, is the name given to the glacier cavern from which the head-waters issue on the melting of the ice and snow. This glacier has its origin on the western slopes of the Satopanth group of peaks, the eastern slopes of which are covered by the glaciers above Bâdrinâth in the Mâna valley. It also is connected with the glaciers along the northern slopes of the Kedârnâth peak, on the south face of which is the temple of that name, so that the three great places of pilgrimage are all within a few miles of horizontal distance from each other.¹ The name *Gau-mukh* is also given to the prayer-bag² which conceals the *mudras* made in the ceremony of the *sandhya*.

Landhaur to Gangotri by old road.

1	Landhaur to Phedi	...	11	Reckoning from the Landhaur Hospital.
2	Bâlal	...	12	Along the Aglar stream.
3	Lalûri	...	12	Cross Nâgûba range.
4	Thona	...	10	Reach Ganges river forest bungalow.
5	Dhûnda	...	12	
6	Bârabât	...	12	A bridge leads to Kedârnâth forest bungalow one mile further on.
7	Moneri	...	11	Hill-shoes can be procured here.
8	Bhatwâri	...	12	
9	Tiara or Elga	...	12	
10	Danguli	...	11	
11	Sûkhi or Jalab	...	14	Forest bungalow between 12th and 13th marches. Crossing the Kapaighât by two wire suspension bridges at Maicha.
12	Derâli	...	10	Cross the Ganges by bridge. Supplies must be procured at Derâli.
13	Bhaironghâti	...	9	The Nilang river here joins the Ganges.
14	Gangotri	...	8	Temple. Very bad road over ladders, scaffolds, &c.
15	Camp	...	10	No made path to foot of glacier, which is six miles from Camp.
	Total	...	167	

¹ A name of Siva.

² See Gazetteer, XI, 874.

Garra or **Deoha**, a river rising at the southern base of the lower hills in patti Chaugadh of parganah Káli Kumaon, near a peak over seven thousand feet. After a short south-easterly course it runs due west and again south, entering the Bhábar between Chorgaliya and Jaula-Sal. It flows southward through the Bareilly district and Sháhjahánpur, and eventually joins the Western Rám-ganga on the left bank. It is known as the Nadhaur in the hills; in the Taráí as the Dewa or Deoha, and further south as the Garra.

Garhwál, a district of the Kumaon Division, is bounded on the north by Tibet; on the east by Kumaon; on the south by Bijnor, and on the west by Tihri and Dehra Dún. It lies between north latitude $29^{\circ}-26'-15''$ and $31^{\circ} 5'-30''$, and between east longitude $78^{\circ}-18'-45''$ and $80^{\circ}-8'-0''$, with an area of 5,500 square miles.

For administrative purposes this area is divided into eleven parganahs, which are further sub-divided into 86 pattis as follows:—

Parganah.	No.	Patti.	Parganah.	No.	Patti.
1 Bárahayún .	1	Banel-yún.	4 Chandkot ..	29	Gorársyún.
	2	Bungarh-yún.		30	Jaintolsyún.
	3	Gagwársyún.		31	Kimgadigár
	4	Idwálsyún.		32	Masundarsyún.
	5	Khátsyún		33	Ma'válsyún.
	6	Kandwálsyún.		34	Phugals-pácha.
	7	Kapholsyún.	5 Dewalgarh ...	35	Ringwársyún.
	8	Manwársyún.		36	Bidolsyún.
	9	Náhlasyún.		37	Sachhansyún
	10	Paidúlsyún.		38	Chalsasyún.
	11	Patwálsyún.		39	Dhaupur.
	12	Ráwálsyún.		40	Ghurilsyún
	13	Sitonsyún.		41	Kandársyún
	14	Aswálsyún.		42	Katholsyún.
2 Badhán ..	15	Khausr.	6 Dasoli ...	43	Band.
	16	Kapíri.		44	Dasoli Malli
	17	Karakot.		45	Dasoli Talli
	18	Nandak.	7 Nigpur ...	46	Bám-n.
	19	Pindawár.		47	Kaliphát Malli
	20	Pudarpár.		48	Kaliphát Talli.
3 Chandpur ..	21	Chandpur Sill.		49	Makhandi.
	22	Chandpur Talli.		50	Nágpur Malla.
	23	Choprakot.		51	Nágpur Bichhía.
	24	Chauthán.		52	Nágpur Talli.
	25	Dhárjyúli.	8 Paikhandi ...	53	Urgam.
	26	Lobha.		54	Parkandi.
	27	Rángadh.		55	Paikhandia Malla.
	28	Sirgur.		56	Paikhandia Talli.

Parganah.	No.	Patti.	Parganah.	No.	Patti
9 Ganga Salán,	57	Dhángu Malla.	11 Talla Salán..	72	Meldhár.
	58	Dhángu Talla.		73	Sáball.
	59	Karaundu Walla.		74	Saundhár.
	60	Karaundu Palla.		75	Talsin.
	61	Langur.		76	Bhábar.
	62	Udepur Malla.		77	Bijlot Walla.
	63	Udepur Bichhla.		78	Bijlot Talla.
	64	Udepur Talla.		79	Bungi.
	65	Ajmer.		80	Badalpur Malla.
	66	Bangarayún.		81	Badalpur Talla.
10 Mallá Salán ...	67	Dhaundyáleyún.		82	Kaurhiya Walla.
	68	Gujaru.		83	Kaurhiya Palla.
	69	Iriyakot.		84	Pamon.
	70	Khūtali.		85	Sila Malla.
	71	Kolágár.		86	Sila Talla.

To the north, the water-parting forms the boundary with Hundes. To the east, the boundary is somewhat arbitrarily fixed by an irregular line drawn from the southern peak of Trisúl to the Pindar river about twenty miles from its source, thence in a south-eastern direction along the Badhán to the Rámanga river near Mehalchauri, crossing it, to where it again meets the river in the Páti Dún. Thence it skirts the southern base of the hills by the Rámnagar and Ganges road to Gorighát on the Ganges. On the west the boundary follows the Ganges river to Deoprayág, thence the Alaknanda to Rudraprayág and after that the Mandákini river to Agastmuni, whence an irregular line above the right bank of that stream to the snowy range to the west of the Kedárnáth temple completes the circuit. The greatest breadth is 55 miles, the least breadth 30 miles, and the mean about 42 miles. The estimated area is 3,520,000 acres or 5,500 square miles. But owing to the difficulty of measuring the snowy wastes the area in acres cannot be correctly given. The natural divisions are mountain ranges and narrow valleys which, as a rule, are little more than ravines. That of Srinagar is the largest in the district, but it is hardly half a mile wide and has an elevation of only 1,500 feet above the level of the sea. To these may be added the narrow strip of waterless forest at the foot of the hills called the Bhábar, about two to three miles in breadth, where it adjoins the plains.

Some centuries back Garhwál was divided into a number of petty chieftainries said to have been fifty-two in number, which were subsequently united

Existing arrangements.

under the Rájá of Chandpur, who transferred his residence to Dewalgarh, and about the fifteenth century to Srinagar. Under these Rájás the existing parganahs were established, and no alteration in their number or limits was made by the Gorkhális. The parganahs were subdivided into pattis, some of which, for various reasons, attained to the position of parganahs at different times. One of the earliest lists gives the following :—Ajmer, Udepur, Salán, Síla, Báráhsyún, Dewalgarh, Choprakot, Dhanpur, Chandpur, Badhún, Dasoli, Paínkhanda, Kapri, Khátali, Nágpur, Parkandi, and Lohba, or seventeen in all. In 1815 there were tahsílís¹ at Srinagar and Chandpur and a peshkár at Kotdwára, where there was also a police station, and at Bhúrighat, Bilásni, and Sigoddi, costing together Rs. 740 a month. The Dhángu tahsíl (Kainúr) was formed in 1817 for the Salán parganah instead of a peshkári at Kotdwára and the entire monthly cost (exclusive of the share of the head-quarters' establishment) is set down at Rs. 488. In 1821, tahsíl Chandpur comprised (1) Chandpur, containing pattis Chandpur, Lohba, Dhanpur (and its mines), and Choprakot; (2) Badhún, containing Badhún, Kapri, and Karakot, and (3) Malla Salán, comprising Síbali, Khátali, Bangársyún, Gujar, Dhaundyálsyún, Saindhár, and Meldhár. The Dhángu tahsíl² contained eleven pattis, Udepur, Ajmir, Dhángu, Síla, Karaundu, Kaurhiya, Langúr, Painún, Bungi, Bijlot, and Badalpur, and was abolished in January, 1822. Five of its pattis were annexed to the Srinagar tahsíl under the name Ganga Salán and six to Chandpur as Talla Salán, reducing the monthly cost of establishment to Rs. 388. Parganah Chamdkot included pattis Iriyakot, Taláin, and Kolagár, and to these were added the cluster of villages from Dewalgarh known as Kotali, and which had been assigned for a long period for the manufacture of powder for the State. In 1830, the tahsíl establishment cost Rs. 125; police Rs. 72 (in Páti Dún and Chándi); and Kánúngos Rs. 125. In 1831 the Srinagar tahsíl³ was abolished, and the entire district was placed under one tahsildár, resident at Kainúr (Kanyún), the old seat of the Chandpur tahsíl. The tahsíl was subsequently again removed to Srinagar. In 1833, patti Panai was transferred from Chandpur to Dhanpur, but the greatest changes were effected by Mr. J. Beckett

¹ To Government, 26th December, 1815, from 27th January, 1816.

² To Government, 14th September, 1821, from 23rd January, 1822.

³ To Commissioner, Bareilly, 1st January, 1831, from Government, 21st January, 1831.

at the current settlement, and are fully noticed elsewhere. In 1883, the head-quarters' establishment for revenue duties cost Rs. : Civil (Judicial) Courts, Rs. : Police, Rs. : and Public Works Rs. : total Rs. The history of the administration of Civil and Criminal Justice will be found under KUMAON (*q.v.*). The head-quarters of the Civil Administration is now at Páori, where the Assistant Commissioner resides. There is now a *tabisildár* at Srinagar, a *pesbkár* at Gairson or Lohba, and police-stations at Srinagar, Kotdwára, Dháron, and Láldháng.

The shape of Garhwál on a map is not unlike that of an hour-glass, broad at the north and south and narrowing to about one-half in the middle. The Alaknanda and its tributaries drain the entire district, and form the valleys, which are, as a rule, much narrower and contain less arable land than those of Kumaon. Mr. Batten's description may be quoted here :—"Vast tracts are composed of bare rocks or are covered with forests : in some parts such features are confined to the upper parts of the mountains whose sides and base are adorned with the richest fertility ; whilst in other parts the fairest slopes or the finest valleys are succeeded by continuous miles of river glen where precipices and woods extend to the lowest depths. Sometimes the jungle is above the cultivated parts ; sometimes below. In one place, individual villages or sets of villages are separated from their neighbours by almost impenetrable forests or impassable crags and rivers ; in another, villages having little barren waste are mutually divided by a small copse or ravine, or by the natural boundary of a stream flowing between their fields ; so various are the features of the country through which the hamlets are interspersed. However notorious one sub-division may be for its plenty and another for its poverty, no opinion in either case can be formed of the natural capabilities of one village by a view of its neighbour in even the smallest sub-division of a tract." The Alaknanda marks the great central line of lowest elevation, receiving rivers on either side which in turn receive minor streams, and these again rills and rivelets until the great dividing ridge is met which forms the watershed between the head waters of the Káli or Sárda on the east and the Ganges system on the west. The entire drainage of Garhwál flows into the Ganges.

With the exception of parganas Bárahsyún and Chaundkot, which are almost entirely bare of arboreal vegetation, the entire district is thickly covered with forest forming in many places an almost impenetrable jungle.

To the north the mountains form a portion of the great Himálayan chain of which the principal peaks in the district are West Trisúl, 23,382 feet above the level of the sea ; East Trisúl, 23,092 feet ; the third peak, 22,342 feet ; Nanda Devi, 25,661 feet ; the Nandakna peaks, 20,772, 20,773, 22,093 feet ; Kamet, 25,373 feet ; Nálikánta, 21,661 feet ; Badrináth, 23,210 feet, and Kedárnáth, 22,790 feet. From the main range to the north-west the slope inclines to the elevated plains of Tibet, and the Vishnuganga river rises gradually from 6,200 feet at its confluence with the Alaknanda to 18,000 feet at its source in the glacier adjoining the Mána pass into Tibet. Between this valley and the upper course of the Alaknanda, here called the Dhauli or 'white river' is a ridge of great height ending on the south in a peak having an elevation of 22,073 feet and in Kamet on the north. The Dhauli valley comes next and leads to the Níti pass into Tibet, which is described in the article *Bhotiya Maháls*. To the south of the main range of hills we find numerous spurs running from it generally in a direction from north-east to south-west and parallel to each other with cross spurs at intervals and occasional ridges of greater elevation, such as Tungnáth or Chandrasila (12,071 feet), Duda-ki-Toli (10,188 feet), and Dhubri (9,862 feet). South of the river Nyár, however, the ranges run more parallel to the plains, and are seldom more than 7,500 feet above the level of the sea. Most of these hills are rugged and densely wooded up to between ten and eleven thousand feet, steep towards the ridges, somewhat flatter about the middle, and end in abrupt slopes towards the valleys. Along the larger rivers, the hills present gradual slopes at the base and end in a succession of narrow terraces or flats, which are all dry and are, as a rule, also cultivated. The soil varies greatly in the different valleys. That of the Alaknanda is somewhat sandy ; of the Pindar, Ramganga, and Nandákini is reddish clay, and that of the Nyár is clay mixed with shingle. The soil in the smaller valleys is usually very rich, being composed of the washings from the hill sides. The strip of Bhábar from Kotdwára to Bhamauri

is separated from the plains by a continuation of the Siwálik range, which is crossed by numerous passes, some of which are practicable for wheeled carriage. The remainder of the southern boundary is wholly open to the plains.

The Bhábar is but partially cultivated, and for the most part consists of forests of *sal* (*Shorea robusta*), *sissu* (*Dalbergia sissu*), and bambus. The

Forests.

forests in the hills have been sufficiently noticed elsewhere.¹ Generally, the southern portion of the hills are still covered with primæval forest. The largest tract in the centre of the district is the tiger-haunted forest of Chandpur, which is still some 25 to 30 miles long by 12 to 15 miles broad. Year by year the jungle is encroached on by cultivation, and people are encouraged to settle in it by the grant of land at nominal rates and the bestowal of the proprietary right if they bring it under the plough. Hitherto the scanty population and the presence of wild animals have retarded the progress of reclamation; but these obstacles are gradually being removed, and a comparison of the state of cultivation in 1815 with that now existing shows a marvellous and steady increase in prosperity. Much of the forest land to the south is now held by the Forest Department, and is rigidly conserved for the sake of the timber now yearly becoming more valuable.

As already noticed, the Alaknanda with its tributaries mark the distinguishing physical features of the district, and show the direction of the lines of

Rivers.

lowest elevation. This river is one of the sacred streams of India and each of the places where it meets a considerable affluent called (*Prayága* or confluence) is esteemed holy, and forms a station in the pilgrimage which all devout Hindus make to Himáchal. The first confluence is at Vishnuprayág, where the waters of the Dhauli from the Niti pass unite with the waters of the Saraswati or Vishnuganga from the Māna pass and thence onwards to Deoprayág, the stream is known as the Alaknanda. At Nandprayág the Nandák stream joins the Alaknanda on the left bank, and brings with it the drainage from the Nandakna peaks and the western slopes of

¹ For very valuable contributions throughout this article on the present state of the district my warm obligations are due to Colonel Garstin, who has also examined these pages whilst passing through the press.

Trisúl. At Karnprayag, on the same bank, is received the Pindar, which drains the southern and eastern slopes of the Trisúl group. The Mandákini falls in on the right bank at Rudrprayag and brings with it the surplus waters of the entire tract along the southern slopes of the Badrináth and Kedárnáth peaks. At Deoprayag the Bhágirathi from Gangotri joins the Alaknanda, and henceforward the united stream is known as the Ganges. The Bhágirathi rises in Tihri from the Gangotri peak, and, though popularly considered the chief branch of the Ganges, is inferior in importance and volume to the Alaknanda. The only other important tributaries are the Nyár and Hiunal streams, which join the Ganges on the left bank below Deoprayag. The only river of any size in Garhwál which does not join the Ganges within the limits of the district is the upper waters of the western Rámanga. This river takes its rise in Lohba, and flowing through Kumaon for a considerable distance, re-enters Garhwál in the Pátli Dún, where it receives the Mandhál, Paláin, and Sona streams on the right bank, and bursting its way through the Siwálíks, reaches the Ganges in the Hardoi district of Oudh. All these rivers, owing to their great velocity and the existence of rocks, boulders, shoals, and rapids are useless for navigation, though several are used for rafting timber. Wherever culturable land occurs near their beds, they are used for irrigation, and are also made available for giving power to mills for grinding corn. The beds of all the rivers consist of hard rock and gravel with a little sand, and little erosion takes place. Diluvion, owing to sudden floods, occasionally takes place; but alluvion in the sense it is used in the plains can never occur. As a rule the banks of all the streams in the hills are abrupt and high. Srinagar, the only place in the district approaching a town, is built on the right bank of the Alaknanda well above the stream, but still before the conquest one-half of the town was swept away by a flood, and again in 1868 and 1880 great loss occurred through a sudden rise in the same river. Rapids and eddies occur in all the rivers at short distances apart. The usual appearance is a succession of short, sharp rapids, sometimes having a considerable fall with a long and deep pool. Occasionally the bed becomes very narrow and runs between gorges with high impassable cliffs on either bank. Such phenomena are most frequent on the Alaknanda and Pindar. None of

the rivers flow through subterranean channels, though the Alaknanda some 25 miles above Joshimath appears to do so owing to rocks having fallen in and completely hidden the water. There are a few small ferries on the Alaknanda, the boat being a canoe formed from a hollowed log. Fords are rare on the rivers rising in the snowy range, but all the others are fordable even in the rainy season, except where there has been a fall of rain sufficient to cause a heavy flood. All the hill streams are liable to floods and occasionally to some of considerable volume. In 1868, water that had been dammed up by a landslip burst the barrier, and, coming down by the Alaknanda, caused very great damage and loss of life. Two large bridges were swept away with some seventy pilgrims who were sleeping on the river bank near Chamoli twenty feet above the ordinary flood level. When such floods happen to flow over any cultivated land they usually, by covering it with rocks and gravel, render it useless for a number of years until the *debris* is cleared away.

There are at present but two small canals six and a half miles long at work. They are taken from two small streams called the Koh and Málin near Kotdwára for the purpose of irrigating the Bhábar in their neighbourhood. It is not improbable that other small canals may be opened along the Bhábar where water is procurable; but this work is in its infancy in Garhwál, as those above mentioned were only commenced in 1869. They irrigate about 1,300 acres of land. There are no lakes of any importance in Garhwál. The largest is Diuri Tál (*q v.*) in Kálichát, which is about 400 yards long by 250 yards wide. It is oval in shape and is mainly interesting from the panoramic view of the snowy range above Kedárnáth which is seen reflected on its surface. There are a few small lakes situate on the tops of some of the high hills, such as Deo Tál near the Mána pass, Gudyár Tál in Páinkhanda Talla, and Bhairon Tál in Dasoli Talli.

There are several hot springs in Garhwál. Those at Gauri Kund on the road to the temple of Kedárnáth are situate above the right bank of the Mandákini river. On the 6th October, at 5 p.m., when the temperature of the air was 64° and that of the river was 52°, the tem-

perature in one of the springs was 74° and in another 128° . The water is collected in an artificial reservoir built for the purpose of bathing, as all pilgrims are required to bathe here before proceeding to Kedárnáth, a procedure full of physical as well as spiritual benefit. There is another spring of a similar description at Badrináth called the Tapt kund. It runs under the temple, and is also collected in a large reservoir for bathing purposes. The temperature was noted at 128° Fahrenheit, when that of the river close by was only 38° . Cold water is let into the reservoir in order to allow of the pilgrims bathing in it. There are four separate hot springs at Tapuban, two about a mile, and two about one-quarter of a mile, from the village of that name, and all close to the Niti road. The two most distant well up into artificial reservoirs and are used as bathing-places, their temperature being 127° and 123° respectively. The other two are springs and are not used for bathing, their temperature being 99° and 109° . The water of the first two is of a dirty colour, and leaves a whitish sediment, but does not seem to have any sulphur in it, while that of the latter two is clear and somewhat aerated though tasteless. The spring of Bhauri lies near the village of Amola in latitude $30^{\circ}-3'$ and longitude $78^{\circ}-2'$. It has a somewhat saline taste and the stones are discolored by a reddish sediment. The elevation of this spring is between 3,500 and 4,000 feet. It rises in a small *śāl* forest and has a temperature of 94° . There are also two other springs considered by the natives to be warm. One occurs at Kulsári on the left bank of the Pindar river, and the other on the river Paláin in Badalpur Patti. The water is rather less cold than ordinary hill water, but not even slightly hot.

Meteorology and climate have already been noticed¹, and here it

Climate.

is only necessary to state that for six months in the year, that is, during the rainy season and until February, the climate is damp. For the remainder of the year it is dry and bracing. But owing to the natural features of the country any general statements regarding the climate are subject to great variations. Towards the passes into Tibet there are no periodical rains, while in the hottest weather it is cool. In the portions bordering on and to the south of the snowy range it is always cool but more moist, while in the rest of the hills the temperature varies, and in the valleys it is intensely hot and feverish during

¹ Vol. X., 201.

the hot weather and rains and bitterly cold during the nights and mornings, though warm in the day time. Under such circumstances the average readings of the thermometer afford no criterion as to the effect of the temperature. The average rainfall at Páori is about 48·4 inches and at Srinagar about 37·1 inches and for the period 1860-61 to 1870-71 about 40 inches. For subsequent years the statistics of Páori are as follows :—

Year.	Rainfall.			Year.	Rainfall.		
	1st June to 30th September.	1st October to 31st January.	1st February to 31st May.		1st June to 30th September.	1st October to 31st January.	1st February to 31st May.
1872-73 ...	32·4	·4	8·7	1878-79 ..	26·9	0·5	6·4
1873-74 ...	26·1	3·5	7·6	1879-80 ...	45·1	3·6	11·8
1874-75 ...	41·0	5	9·5	1880-81 ...	35·8	4·0	9·1
1875-76 ...	31·4	2·2	5·7	1881-82 ...	32·1	2·2	7·6
1876-77 ..	21·8	6·6	18·6	1882-83 ...	40·1	11·9	14·1
1877-78 ..	14·5	6·0	13·4	1883-84 ...	...	...	...

The nearest railway station to Srinagar is that of Saháranpur, distant about 100 miles, but the opening of the branch line from Moradabad to Hardwár will place the district in much nearer communication with the railway. The passes into Tibet are sufficiently noticed under the article BHOTIYA MAHÁLS, whilst those to the plains occur at Bilásni, Bhúríghát, Kotdwára, Pálpur, Bábli and Kangra. Besides these there are numerous bye-passes known as *chorgháts* (thieves' passes) leading to individual villages and which are but seldom used by general travellers. The district is well-supplied with hill-roads varying from ten to twelve feet in width, nearly all of which are bridged, and attention is now being given to improving those that exist rather than to making new roads. There are nearly one thousand miles of road in the district kept up by a Government grant and the labour of the people through whose villages they pass, a duty covenanted for and allowed for in their agreements with Government regarding the land-revenue. It was found that thus the burden could be easiest borne and that labour was a fitter form for contribution than a money cess and could be borne much easier by all classes. The patwári here, as in Kumaon, is *ex-officio* the superintendent of repairs, which is all that the people are required

to effect ; bridges and expensive works being constructed by the skilled Government establishment entertained for the purpose. The roads in the hills are not metalled, and are made by cutting the hill side to about two-thirds of the width and building up and filling in the outer side. When practicable the whole width is cut, but this cannot always be done, and in many places where the hill side is precipitous the whole has to be built up for a considerable height. Lime is rarely used in such retaining walls as the stone is good and hill-men are very good wall builders. The ordinary cost of a hill-road of from eight to ten feet in breadth is from Rs. 250 to Rs. 400 per mile, but where there is much rock-cutting the cost rises as high as Rs. 800 a mile. These averages include the cost of the erection of small culverts usually crossed by slate flags or wooden sleepers.

Traill on roads.

Traill's remarks on the difficulties of road-making hold good to the present day. He

writes :--

" The rapidity of the mountain rivers offers great impediments to communication and intercourse, more particularly during the rainy season when (in the absence of bridges) the trader, his merchandise and cattle can only be crossed over the large rivers by the assistance of the ghat people, who swim supported on dried gourds. The bridges are of four kinds : the first, consists of a single spar thrown across from bank to bank, the second, is formed of successive layers of timbers, the upper gradually projecting beyond the lower from either bank towards each other, in the form of an arch, until the interval in the centre be sufficiently reduced to admit of a single timber being thrown across the upper layers, the ends of the projecting timbers being secured in the stone piers ; these bridges, which are called *sangas*, are usually from two to three timbers wide, and have sometimes a railing on each side. The third description of bridges, called the *jhula*, is constructed of ropes ; two sets of cables being stretched across the river, and the ends secured in the banks, the roadway, consisting of slight ladders of wood two feet in breadth, is suspended parallel to the cables by ropes of about three feet in length. By this arrangement, the horizontal cables form a balustrade to support the passenger, while reaching from step to step of the ladders. To make the *jhula* practicable for goats and sheep, the interstices of the ladders are sometimes closed up with twigs laid close to each other. A construction of this kind necessarily requires a high bank on both sides, and where this evident advantage may be wanting, the deficiency of height is supplied by a wooden gallows, erected on the two banks over which the ends of the cables are passed. The fourth and most simple bridge consists merely of a single cable stretched across the stream, to which is suspended a basket traversing on a wooden ring ; the passenger or baggage being placed in this basket, it is drawn across by a man on the opposite side by

means of a rope attached to the bottom. This is termed a *chhínka* (*kshenka*). The two last descriptions of bridge are constructed at a very trifling expense, as the ropes used are made of a silky species of grass (*bábar*) which is produced in abundance in every part of the province. Iron chain bridges, as described in Turner's Tibet, would appear to have been used in this province at a remote period, but no remains of them now exist. A considerable number of bridges (*sangra*) have been erected under the British Government, and many, from the want of durability in the timbers, have had to be renewed after three or four years, so that it has been eventually found advantageous to resort to the plan of iron chain bridges in all cases."

The following are the principal roads in the Garhwál district and a few of the principal routes. The procedure to be followed is to indent for coolies at Páori, when an order will be given for the number required, and a peon will be detached to go on ahead and collect from the next patwári the coolies for the next stage and supplies at the resting place. These consist of flour and grain and an occasional fowl, so that it is practically necessary to take all supplies with one. Much inconvenience will be avoided if the traveller himself pays all coolies with his own hand and thus prevents his own followers from levying a percentage, a procedure which would be highly resented in the hills :—

From	To	Length in miles.	Number of marches	Remarks.
Chatuwa Pípal,	Bhíri ...	31	2	Good road, partially bridged.
Gwáldam ...	Nandprayág ...	42	3½	Road good, bridged throughout. The marches are Katyúr, Baijnáth to Jola-bugurb passing Gwáldam 12 miles; Dungari, 12; Ghát, 12; Nandprayág, 12.
Ditto (via Pindar valley).	Karnprayág ...	35	3	Fair road, crosses Pindar twice, a bridge is wanted.
Lohba ...	Búngidhár ...	13	1	Bridged throughout.
Ditto ...	Kainúr ...	23	2	Bridle-path, little used, which crosses the Dudakitoli range at 10,000 feet.
Pokhri ...	Chemoli ...	15	1	Bridle-path, which is being bridged.
Bánni ...	Gwáldam ...	35	3	Path impassable in the rains for horses.
Páori ...	Deoprayág ...	15	1	
Kainúr ...	Bámnagar (to Marchúla bridge.)	45	4	Good road, bridged all the way.
Kainúr ...	Dháron (in Bhá-bar.)	63	6	Bridged as far as the Pátili Dán, where it enters forest boundary.

From	To	Length in miles.	Number of marches.	Remarks.
Páori ...	Dháron ...	67½	6	Bridged as far as the Páti Dún, where it enters forest boundary.
Chándpur ...	Ko'dwára ...	84½	7	Bridged all through.
Ukhlet ...	Kálúshahíd ...	42½	4	Bridged up to forest boundary, good.
Ditto ...	Domalla ...	28½	3	Bridged throughout, good.
Dwárikhál or Langár.	Gorighát ...	47½	4	Fair, partially bridged.
Páori ...	Agáspyr (and on to Almora).	51½	4	Bridged throughout, bungalows at Jholl and Kunjholi.
Ditto ...	Chatuwa Pipal...	49	4	Fair road along a high ridge.
Ditto ...	Byághát ...	27	2	Bridle path.

Routes from Srinagar and Páori showing the stages along postal line and pilgrim road.

Stage.	Dis- tance.	Remarks.	Stage.	Dis- tance	Remarks.
a.—FROM SRINAGAR TO HARDWAR AS FAR AS THE GARHWÁL BOUNDARY.			c.—GUPTKÁSHI TO CHAMOLI.		
1. Sítakoti ...	11	No Baniya.	1. Gwáliya-bgr.	9	No Baniya.
2. Byághát...	14	Baniya at Deoprayág passed en-route.	2. Chopta (hence Tungnáth).	11	Baniya only from May to October.
3 Chándpur ki mánda.	10½	No Baniya.	3. Mandal ...	12	Ditto.
4. Bairaguna,	12	Ditto.	4. Chamoli, (Gopeswar).	11	Baniya's shop. The road is good and in good repair.
5. Lachhman Jhála.	9	Ditto. Road runs along and above the left bank of the Alaknanda and Ganges.			
b.—SRINAGAR TO KEDÁRNATH OR PILGRIM ROAD.			d.—SRINAGAR TO NITI.		
1. Sirabugr ...	12	Baniya's shop.	1. Sirabugr ...	12	Baniya's shop.
2. Panár (Rudraprayág.)	7	Ditto.	2. Punár ...	7	Ditto.
3. Agastmuni.	12	Ditto.	3. Chatuwa Pipal.	15	Ditto.
4. Guptkáshi,	14	Ditto.	4. Nandprayág.	12½	Ditto.
5. Y'hata.	8	No Baniya.	5. Chamoli ..	7	Ditto.
6. Jhilmilpatan,	10	Ditto.	6. Pipal Koti,	8	Ditto.
7 Kedárnáth,	10	No Baniya. This is a fair road except the last march.	7. Hílang ..	11	Ditto.
			8. Joshimath,	7	Ditto and bungalow. Hence by Badrináth to Mána is four marches: Pándukewar, 9 miles; Badrináth, 9 miles, and Mána two beyond.

Stage.	Distance.	Remarks.	Stage.	Distance.	Remarks.
<i>d.—SRINAGAR TO NITI—(concl'd.)</i>			<i>f.—GAWAI TO JOSHI-MATH—(concl'd.)</i>		
8. Tapuban...	7	No Baniya.	4. Rámní ...	14	Baniya's shop.
9. Suráin Thota...	10	Ditto.	5. Kaliyághát or Pána...	14	Ditto.
10. Jhelam ...	9	Ditto.	6. Khulára ...	15	No Baniya. Crossing Kuanli pass, 15,000 feet.
11. Malári ...	8	Ditto.	7. Joshimath,	10	Bungalow and Baniya.
12. Gamsáli...	9	Ditto.	8. Tapuban ...	8	No Baniya; thence see route <i>d</i> .
13. Niti ...	4	Ditto.			
There are no long or very steep ascents along this road, which is rideable almost the whole way. Above Joshimath villages are far apart, and if a traveller does not make the regular marches, he must take all supplies with him.			<i>g.—ALMORA TO MASURI.</i>		
<i>e.—SRINAGAR TO KOTDWARA.</i>			1. Bhalas khot.	13½	Bungalow.
1. Páori ...	7½	Baniya.	2. Dwáráhát,	12½	Ditto.
2. Naithána...	15	Ditto. and bungalow.	3. Ganái ...	9	Ditto.
3. Thingábnj	9	Baniya.	4. Deghát .	15	No bungalow.
4. Dáramandi,	7½	Ditto and bungalow: 3 and 4 can be made in one march.	5. Búngi-dhár.	8	Bungalow (D).
5. Kotdwára,	13	Bazar and bungalow.	6. Kalnúr ...	12½	Ditto.
			7. Chhlpbal-ghát.	16	Ditto (D).
<i>f.—GAWAI TO JOSHI-MATH.</i>			8. Páori ..	12½	No bungalow.
1. Lohba ...	15	Bungalow and Baniya.	9. Srinagar,	7½	Bungalow (D).
2. Adbadri ...	13	Baniya's shop.	10. Takuli ..	13	No bungalow.
3. Karnprayág.	10	Ditto.	11. Pan ..	9½	Small house.
4. Nandprayág.	9	Ditto; hence as in Ganges valley route <i>d</i> .	12. Tibri ..	11½	Bungalow.
or 1. Lohba ...	15		13. Kanriyá-gala.	13	No bungalow.
2. Naráyan-bugr.	13	Baniya's shop and small house.	14. Dhanauli.	18	Ditto.
3. Bájbugr...	10	Baniya.	15. Masúri ...	16	Ditto.
4. Nandprayág.	14	Ditto; hence as route <i>d</i> .			
or from Bájbugr to			The bungalows along this road are furnished but have no servants except a chaukidár. There is a Baniya's shop at each encamping-ground in British territory, which ends at Srinagar. Supplies can be had in Native Garhwál by sending notice ahead to the Rája's agents. It is usual to break the march from Dhanauli into two.		

The products of the district, animal, vegetable and mineral,

Customs, &c.

have been noticed in the previous volumes.

There remains the general account of the people themselves and the fiscal, criminal and civil administration. There has been no change in the normal state of the population of the district of late years. It is now as it has always been essentially agricultural, and there is nothing to attract the mass of the people from their hereditary pursuits beyond the demand for unskilled

labour on the public works and coolies for the sanitarium. Even to the present day the Garhwáli bears in his character and appearance the stamp of one who has passed through great trials, and in judging of his conduct and condition we must not forget the horrors of the Gorkhálí rule. The following account, taken from a journey made by Captain Raper whilst Garhwál was still under the Gorkhális, will give some account of what the people appeared like, to an intelligent observer :—

“ The inhabitants of Garhwál differ much in their appearance, dress and language from the people of Kumaon. Although not large in stature, they appear more active and capable of greater exertions. This may probably proceed from their mode of life, the greater part of them earning their subsistence by carrying burdens up and down the passes and by attending the pilgrims to the holy places. The mode of carrying loads in this part of the country differs from that practised in Kumaon. The Garhwáls support the load on the back by means of slings, through which they pass their arms, while the Kumaonis follow the method of the coolies in the lowlands, placing the burden on the head or supporting it by a bandage round the forehead. This difference in the mode of travelling is strongly characteristic of the nature of the two countries ; for, in the perpendicular and rugged paths of Garhwál, the methods adopted in Kumaon would be impracticable. The Garhwáls appear, however, not to possess more energy or spirit than their neighbours ; for, although they smart most severely under the Gorkhálí lash, they have not once made an attempt to regain their liberty. They are kept in a state of the most servile subjection, and hundreds of them are annually seized and sold by their tyrannical rulers. The country is in consequence daily decreasing in population, and many large villages, which were in a flourishing state during the time of the Bájás are now totally deserted. The rod of iron which has been held over them since the conquest has probably altered the character of the people, and perverted those qualities which under a less despotic Government might have been exhibited under a more amiable form. At the present day (judging from those who accompanied us) they have little but their physical properties to recommend them. They are practised in carrying very heavy loads, are capable of undergoing great fatigue, and will travel the whole day without subsistence ; but their dispositions appear to be sullen and litigious, constantly showing itself in little bickerings, both in words and actions. Frequent instances occur in which they refuse to take up their load, because a small brass pot or some article of no greater weight was added to the burden. They are faithful, however, to the trust reposed in them, and it rarely happens that any articles committed to their charge are pilfered or purloined.”

Another traveller writes thus of the people of Western Garhwál :—

"Their dress consists of a jacket or dress of blanket, tied round the waist and open down the right breast, tight in the body and arms, but furnished with short skirts all round, very ample, and gathered in folds. Around their waist they wear a girdle, either of woollen stuff, or of rope formed of goat's hair, neatly plaited. They wear drawers or trousers very loose to the calf of the leg, but tighter and falling in numerous creases below it to the heel. A piece of blanket stuff, somewhat lighter than the rest, is worn round the shoulders like the Scotch plaid, as rain or sun may require to keep the body dry, or to protect the head from heat. On their head they wear a black cap of hair and wool fitted to the shape, and ending in a small point. The wool from which they manufacture these cloths is of extreme coarseness, very far inferior to that in use to the westward, which is sometimes woven into blankets of considerable beauty and fineness. There are only two colours in use, viz., a dark brown and a dirty gray. The former is most affected by the men of superior rank or means. The dress of the women in no respect varies from that of the men, except that sometimes their heads are covered with a blue or checked handkerchief; and they wear beads of glass or pewter in as great profusion as they can obtain, and bangles of the same metal, of great size, round their arms and ankles."

Of the Bhotiyas he remarks :—

"They have stout well-built figures, their complexions are frequently very fair, though much sunburnt; their eyes often blue; their hair and beards curled, and of a light or red colour. They seem admirably calculated to form a body of soldiers fit to act in this hilly region. Occasionally traces may be observed of the Mongolian features: the small eye, high cheek bone, and meagre mustachios, but they were not sufficiently prevalent to authorise the supposition of any considerable intercourse or intermixture."

"The Gorkhalis have ruled in Garhwál for nearly twelve years, previously to which a severe contest had been kept up, which drained the country of men and money. They appear, in their subsequent conduct to this unfortunate province, to have borne in mind the trouble it cost them to win it, and acted as if determined to revenge it. Its old families were destroyed; all those persons of rank and importance who were taken were murdered or banished; its villages burnt and desolated, and great numbers of its inhabitants sold as slaves. The remaining part were oppressed by heavy taxes, and many voluntary banishments and emigrations took place to avoid a tyranny they could not withstand. Thus, throughout great part of Garhwál, the traveller sees only the ruins of villages, and the traces of former cultivation, now abandoned. The inhabitants that remain are, in all probability, the lowest and most ignorant; and, it may fairly be presumed, have sunk lower in exertion and mind from the oppression they have groaned under."

Their houses are narrow and often present a barrack-like appearance, with a frontage perhaps of 100 feet or more. The houses in villages are usually two-storied, the lower story being appropriated to cattle.

The back of the house is entirely shut up, the front of the upper story has frequently an enclosed verandah, three or four feet broad, extending the length of the house. The road through a village has usually a stone causeway about two feet broad and three to four feet high running through the centre of the street. From this, small, raised paths lead to the upper apartments of the houses forming with the central parapet enclosures for cattle. The dung heap always forms a prominent object, and the villages are commonly buried in dense crops of gigantic hemp, while the houses are covered with a profusion of scandent vegetables, such as cucumbers, melons, &c. The inside of the houses are on a par with the exterior, the rooms being low, dark, and confined: to this utter disregard of sanitation, the fevers prevalent in the hot weather may be assigned.

The usual style of temple architecture is a cube surmounted by a cone crowned with a large round stone not unlike a Turk's cap and sometimes a melon shaped ornament on the top of this, and often in addition a slight square projecting canopy of wood with a roof of slate or copper sheets surmounted by a copper weather-cock ornament called a *kalas*. Some of the larger temples have a large square room built on in front of them for assemblies, giving something of a church and spire appearance to the whole. The *baults* or covered fountains are not remarkable for either size or beauty, and consist for the most part of covered reservoirs merely. A few are however

to be met with erected by former Rájás which exhibit some architectural ornament, being surrounded by light verandahs, supported by pillars, and having their interior decorated with sculpture. The erection of *baults* being considered a meritorious work, numerous buildings of this description are to be found in the neighbourhood of all villages and along roads of particular resort.

The only buildings remaining to be noticed are the forts, which, from the state of internal Government under the ancient Rájás, were extremely numerous, but the greater number are now in mere ruins. They were usually built of large blocks of hewn stones, neatly fitted to each other, with loop holes in the walls for matchlocks or small *jinjals*, and were always situated on the peak of some mountain, from which

Temples.

Wells.

Forts.

circumstance, no doubt, they derived their name of *kalanga*. The choice of their position depended on the difficulties of approach, the steepness of the sides of the mountains, and the proximity of water. The mountain, towards the summit, was rendered as perpendicular as possible by scarping, and where the ridge approaching the peak admitted, a trench was dug across, which was passable only by means of a removable bridge. The remains of forts still exist at Gujaru, Kath-ki-nau, Gágar, Kálimath, Naithána, and Lohba, &c.

Of the social customs of the people of Garhwál the most common and demoralising is polygamy. Every man who can afford it keeps two or more wives, and the result is that a great deal of immorality exists amongst the women. The custom probably arose from the great difficulty there was in cultivating the large amount of waste land available. Wives were procured to help in field-work and were looked on as beasts of burden; indeed up to the present day they are treated as such, and on them falls the greater portion of the agricultural work, consequently many desert their husbands, whilst yearly a number commit suicide. Children are contracted at an early age and marriages are very expensive, owing to the sum which is paid for the bride. The amount varies from twenty-five to a thousand rupees, according to the rank and property of the parties; and from this amount are defrayed the expenses of the marriage ceremonies and of the bride's portion. In equal marriages amongst the higher classes of landholders the disbursements usually exceed the sum received from the bridegroom. In the case of second and subsequent engagements entered into by persons of this description the new bride is received on terms of inferiority to the first wife and the expenditure is less in proportion to the sum received for her. The contract is entirely one of purchase and sale, conferring on the purchaser a disposable property in the women bought, a right that was recognized under the former Governments, when a tax was levied on the sale of wives and widows. When the means of the suitor are insufficient to satisfy the demands of the parents, an equivalent is sometimes accepted in the personal services of the former for a given term of years, on the conclusion of which he may take away his wife. Widows are sometimes remarried; but it is a civil contract, made before the *patwári*, and is not held to be

very binding. Most widows take up their residence with other men as mistresses but this is not viewed as disgraceful, and illegitimate children have by custom obtained in almost every family equal rights with legitimate ones. A very few families of the highest caste are an exception to the rule.

Polyandry does not exist in Kumaon or British Garhwál ; but in Western Tihri and Jaunsár Báwar (*q.v.*)
Polyandry.

“when the eldest brother marries, the woman is equally the wife of his younger brother, though the children are called the children of the eldest brother.¹ When much difference exists in the ages of the brothers of a family, as, for instance, when there are six brothers, the elder may be grown up while the younger are but children, the three elder then marry a wife, and when the young ones come of age they marry another, but the two wives are considered equally the wives of all six. It is remarkable that wherever polyandry exists there is a striking discrepancy in the proportions of the sexes amongst young children as well as amongst adults. Thus in a village where there were upwards of four hundred boys there were only one hundred and twenty girls, yet the temptation to female infanticide, owing to expensive marriages and extravagant dowers which exist amongst the Rájputs of the plains, are not found in the hills where the marriages are comparatively inexpensive, and where the wife, instead of bringing a large dowry, is usually purchased for a considerable sum from her parents. In the Garhwál hills, moreover, where polygamy is prevalent, there is a surplus of female children.”

Amongst other customs, mention may be made of the practice of deciding quarrels and disputes regarding
Ordeal. land by an oath. This has several forms.

It may be on a son's head, but this is very uncommon, or on a clod of the land in dispute, or by one side cutting in two a piece of bambu placed on the disputed land by the opposite party. But the most common custom is for the form of oath to be taken to be written on a piece of paper called *banda*, which one party leaves in the temple where he worships and which the opposite side takes up. These oaths are considered most binding, so much so that a dispute settled in this manner is hardly ever heard of again. The parties,

¹ Denlop : Hunting in the Himalaya, 181.

however, so deciding are usually ever after out of caste as regards each other. Besides Hinduism no other religion has any firm footing in Garhwál. Enough has been written regarding religion in these hills, and the list of temples and deities worshipped can be consulted in the previous volume. There are a few Sikhs, Musalmáns and Jainas, but their numbers are very small and at the same time they are so scattered as to have no influence, local or other, whatsoever. There is a Christian Mission at Chapra, one mile from Páori, but it is in its infancy and has made but few converts, its efforts being chiefly directed to education at present.

The hills are never subject to disastrous floods, the drainage channels being sufficient to carry away all excessive moisture. Here and there in the rains damage is sometimes done to small portions of land, but it is never serious. Blights and drought occasionally occur, but these never affect the whole district at once. Blight generally attacks the crops in the low villages and shrivels up the grain, rendering it light though rarely unfit for human food. Droughts also occasionally occur, but as there are high ranges of hills throughout the district which attract the clouds and bring them to the villages in their vicinity, the drought is never general, although it may extend to so large a portion of the district as to render its effects felt all over it. The last great drought was in 1867, when the spring crops failed in all the lower and most fertile half of the district. Government advanced Rs. 10,000 and grain was purchased in the Bhábar and carried up by the people themselves to certain centres, where it was sold. There was no great scarcity of money at the time, so that the majority of purchasers paid ready money, a few giving labour in exchange for food. This famine was only temporary as the autumn crops of the same year were excellent. In the great famine years 1868-70 the district suffered very little, and was in the end a gainer, for measures were taken to prevent the export of grain, whilst the ingress of pilgrims was forbidden, and as the crop of 1869 turned out better than was expected, when export was permitted in the cold weather of 1869-70 the people sold grain in large quantities in the Bijnor district at very high rates. This last famine also acted as an incentive to them to increase cultivation.

It not unfrequently happens that the crops are damaged by an excessive fall of rain which rots the wheat, and, if, in the rains, prevents the ears of rice and millet filling. In 1872, the people suffered somewhat from this cause. Want of carriage is the great difficulty in relieving famines in the hills, for they can only draw their supplies from the Bhábar and adjacent districts ; and to reach these places a belt of malarious and very hot jungle has to be passed : the consequence is that should famine arise towards the end of the hot season or in the rains it is almost impossible to import the necessary quantity of grain, for the roads from the centre of this district to the Bhábar are not everywhere passable for baggage animals, and free cooly labour is very hard to procure, so that the only other means is by forced labour, and it is very hard to send men against their will to what they consider certain death in the Bhábar. Until broad roads, easily passable for baggage animals, are made, this difficulty must continue to exist. It is hard to lay down a rule as to what prices show that famine prevails, for there are no large towns or marts, and owing to the nature of the country grain may be cheap in one part, while scarcity prevails in another: but when wheat is selling at eight sers and *manduwa* at ten or twelve sers per rupee, in any one part, we may feel sure that famine prevails there. A great deal, however, depends on the time of year. If scarcity prevails in the cold season, there is not much cause for anxiety, as the people can then earn sufficient to support themselves, and can also import from the several marts along the foot of the hills, unless famine also prevails in the neighbouring plain districts ; but should it continue into, or break out in the hot season, it becomes, as before stated, a very difficult matter and it can only be treated by making all possible arrangements to import a sufficiency of grain before the rains set in. One great safeguard against famines is the cultivation that has been started by the Commissioner of Kumaon in the Kumaon Bhábar, as it is worked by irrigation, the crop can never fail ; while it is more accessible to hill men, who themselves are the principal cultivators. Steps have been taken for having similar cultivation wherever water is available in the Garhwál Bhábar ; but the water-supply is poor, and it can never be carried out to the extent it has reached in Kumaon : still even small patches here and there will be a great

help in times of scarcity, as the soil is very rich and yields a large return. There are, as already stated, but six and-a-half miles of canal in Garhwál, but the people make use of the large water supply available by turning small channels from the rivers and streams to every place to which their limited means of levelling a cutting will allow them. A great deal more can still be done in this manner, and where practicable, they are being assisted by being given the services of a land leveller. Great care is requisite that channels be not taken from points where a stream can force its way along them, as irremediable damage has in some instances occurred by a sudden flood forcing its way along a channel and destroying almost all the land irrigated by it. The effects of this kind of irrigation on the climate and habits of the people is not very perceptible, as it is usually employed in low, damp villages, which are naturally unhealthy and malarious; but as it is used mainly for rice cultivation, it must increase the healthiness of the climate, and though the natural drainage of the country does lessen its ill effects, they are plainly visible in the appearance of the inhabitants of villages where irrigation abounds.

The only industry carried on under European superintendence is the tea planting, some account of which
 Tea. has already been given.¹ In 1842 the Chinese labourers² under Mr. Blinkworth produced the first 6½ pounds of tea "called by them pouchong, and made from the coarser leaves," and Dr. Falconer was asked to inspect the gardens which were in a flourishing state. Since then many lakhs have been expended by private individuals on tea estates. In Garhwál alone they employ about 400 permanent and 600 short service labourers, the latter being employed during the picking season. The annual expenditure on these estates amounts to Rs. 38,000. Formerly it was very much larger; but the planters have learned to economise labour, and some estates hence had to reduce their expenditure, for few show a profit balance. The trade with Central Asia, which at one time gave great hopes of proving remunerative, has been practically closed by the action of our Russian friends in putting a prohibitive duty on all articles imported from India. The planters also complain that the reduction in duty on Chinese teas has also affected them injuriously.

¹ Gazetteer, X.

² To Government, 3rd August, 1842.

There are no large banking establishments in the district. The richest money-lender does not own Rs. 15,000, and the average wealth of that class does not exceed five to seven hundred rupees. The people never lend amongst themselves largely without taking bonds or charging interest. The Bhotiyas are the largest borrowers, as they are very reckless and improvident, and from their being for the most part uneducated, they form an easy prey to the professional usurer. The ordinary rate of interest is 25 per cent. ; but in addition thereto a certain sum, usually five per cent. of the money, is deducted at the time of lending it; this is called *Ghant Kholdi*, or fee for 'loosening the purse-strings,' so that in reality the rate of interest is much higher than that nominally taken, a proceeding not unknown in Europe. Pawning is hardly known and not much practised. Mortgages of moveable property are infrequent, and the same rate of interest is taken as for money. Mortgages of immoveable property are common. They are of two descriptions, one where possession of the property is given to the mortgagee and no interest is charged, the other where the land is merely security for the debt, and interest is charged at the usual rates. Land is hardly ever purchased as an investment, but merely to satisfy the craving that all hill-men have to become proprietors. Traill thus describes the modes of transfer prevailing in 1823 :—

"The modes of private transfer are, first, by absolute sale, called *dhuli bholi*, in which the purchaser becomes vested with the same rights, and under the same obligations, as the vendor. In the second mode, termed *mit*, the purchaser receives the land rent free, the vendor making himself responsible for the annual amount of its assessment during his life, and on his death, the purchaser becomes answerable for the demand. There was another species of *mit*, in which the sale was not absolute, right of redemption being reserved to the mortgagor and his heirs, on payment of the amount advanced, but till this took place, the latter continued to pay the revenue. When no heir of the mortgagor remained forthcoming, as in the former case, the rent fell on the mortgagee. The fourth form was that of simple mortgage or *bhandat*, in which right of redemption was sometimes expressly barred, after the expiration of a given term of years; most commonly it was reserved indefinitely. The landed proprietors, however, ever evince the most tenacious attachment to their estates, whatever be their extent, and never voluntarily alienate them, except under circumstances of extreme necessity. This, joined to the repeated family partitions arising under the Hindu law of inheritance, has reduced landed property throughout the country to the most minute state of sub-division."

Coin is accumulating, but not so much from trade as from carrying and supplying the wants of the thousands of pilgrims who come yearly to visit the shrines of Badrináth and Kedárnáth. The tea-planters, too, have spent large sums of money in cultivation; a great portion of the money so received is expended in purchasing wives and building better houses. Some is turned into ornaments, and but very little is expended in improving the land except by purchasing cattle, the number of which, notwithstanding disease, is yearly increasing.

Taking them as a whole, the people are very frugal in their

habits. *Manduwa* (*Eleusine coracana*) and

Food. *mandira* or *jhangora* (*Oplismenus frumentaceus*) form the staple food of the lower classes in the hills, varied occasionally with rice. The better classes use wheat, rice, and the various species of *ddl*, with vegetables and *gur*, a preparation of molasses. With but few exceptions all classes readily partake of animal food except that forbidden by religion and the flesh of carnivorous animals. Goats, hill sheep, and venison are eaten. A prejudice exists against the plains sheep, its long tail rendering it in the eyes of the hill-men a species of dog. Milk is an universal article of diet, and tea is gradually making its way. Tobacco is used by almost all classes, but by some only in secret. The use of spirits is supposed to be confined to the Doms, but most classes take it medicinally with much advantage. Vegetables of all kinds wild and cultivated are eaten, and hill-men consider most herbs and roots to be edible, a belief which is sometimes attended with fatal results. In ordinary seasons the daily food costs as follows:—Lowest classes half a ser of *manduwa*, one-third of an anna; half a ser of *kauni* or *jhangora*, the same; vegetables, *ddl*, salt, oil, wood, seven pies or a total of $1\frac{1}{4}$ anna. Petty traders and the better class of agriculturists substitute red wheat and inferior rice of the same quantity at a cost of about two annas, while the better class of traders and well-to-do persons add clarified butter and milk, which cost $3\frac{1}{4}$ annas a day. Officials and the higher classes use the flour of white wheat and good rice. Wages have increased more than 25 per cent. in the last 20 years. In 1850 coolies received Rs. $3\frac{1}{2}$ to Rs. 4 against Rs. 4 to Rs. 5 now; smiths now receive Rs. 10 to Rs. 14, in 1850 Rs. 6 to Rs. 8; masons and carpenters now Rs. 8

Wages

to Rs. 12, in 1850, Rs. 6 to Rs. 8. Agricultural day labourers receive as before half a *ser* of rice and their food. In the Bhábar for cutting crops the rule is that the reaper receives one head load or 25 to 30 *sers* of grain for each twenty head-loads cut. A cultivating contract is sometimes made by which the owner supplies the cattle and half the seed, and receives in return two-thirds of the produce.

The following extracts from Colonel Fisher's report in 1888 will close this portion of our subject :—

"If by wealth is meant the possession of cash or other personal property convertible into cash, then the Garhwál cultivator is the poorest of the poor; but, on the other hand, his land provides his food and homely clothing, his sheep the wool for his blanket. Salt he can always procure in exchange for surplus grain. Consequently money has but a limited value in a country innocent of trade on any considerable scale. Their houses even are constructed by mutual help. Money will procure a wife, pay revenue or rent, and purchase plough bullocks, but beyond the above, the cultivator has no pecuniary wants or aspirations at present; what he may have when "primary education" has done its work is another matter. The great want of the district is external trade, and without capital it is not possible to start it. In the meanwhile, communications are much improved, and the approaching railway through Bijnor the district and its dealings with the Forest Department may create a labour market and a trade in the not far distant future. The trade in borax and salt is confined to the people of the northern parganahs. There have been no special measures adopted to improve backward tracts beyond the small experiment in the Garhwál Bhábar. In this district the pressure of population on over-crowded areas works in an automatic fashion. In parts of the country where this pressure is severe the landless classes, or those who have become almost landless from the sub-division of ancestral property, either apply for waste plots averaging from 10 to 25 acres on "nayat" leases, or migrate to villages possessing waste land fit for the plough and become tenants with occupancy rights (*dhayats*) or tenants at-will (*mirhans*). In other parts of Garhwál those who have acquired money in Government service or other employment apply for waste plots and invite tenants on favourable terms to bring the land under cultivation, and thus local pressure relieves itself without any special official interference."

Great labour and considerable skill are shown in the mode of agriculture practised in the hills. The common plough in Kumaon is of very simple construction. It consists of an upright post to the lower part of which is attached a flat, pointed piece of wood at an angle slightly inclined to the earth. At the point of this flat piece an iron spike is inserted, and thus the two together represent the coulter, share and mould-board of the English plough. From the middle of the upright post, a pole extends forward to which the oxen are attached

by a yoke. A small handle at the top of the upright post enables the ploughman to guide the plough in the correct course, whilst the oxen are guided by his voice. This primitive instrument penetrates but a few inches into the soil, but appears to produce fair results. After ploughing the clods of earth (*del*) in the furrows are broken by a long and heavy wooden mallet called *dehaya*, and after sowing the furrows are closed by an oblong flat piece of wood with a long handle, called a *syára*. The *danyála* is a large wooden rake or harrow drawn by oxen, and *jhekra* is a branch of a tree used to harrow fields sown with *manduwa*. The *kutala* is an iron hook with a wooden handle and the *dátula* is a sickle. The *dabliyáta* is a club used for threshing *mandwa*; a wooden box used for storing grain is called *bhakár*, a hand-mill for grinding grain is *chaki*, and a water-mill is *pan-chaki* or *ghard* in Garhwál. The plough is drawn by a pair of small bullocks, and the soil is usually turned two or three times, after which the harrow is drawn over it and it is pulverised. Manure is used as largely as it is procurable, and is of two kinds; that of animals mixed with leaves, and that procured from the ashes of burned jungle. Common rice and *sáthi* rice, the common millets and *manduwa* are always harrowed once when the plants have attained three to four inches in height. The spring crops are cleaned once, but the autumn crops, notably rice, have to be weeded frequently. When the very steep nature of the country is considered, it is wonderful how the people have been able to terrace it in the way that they have, seeing that in places the fields formed are not three yards wide. Irrigation, too, is practised with some ease by means of aqueducts or of small streams which are either diverted from large streams, or are a collection of small springs. In places where precipitous rocks occur, troughs of wood are made use of, and where the soil is too loose, walls of stone are built, having a channel at the top made watertight by a lining of mud. Colonel Fisher writes in 1883:—

"Irrigation is, since the lessons taught by the scarcity of 1877-78, slowly but surely progressing in all localities where it is found practicable or remunerative. The villages at high elevations adhere to the opinion that water from cold and shaded ravines is not beneficial to the crops at large, often chills the ground too much, and does more harm than good, and in seasons of extreme drought the water-supply itself fails, and thus all outlay on such projects does not advance with the rapidity a superficial observer would expect. The classification of land, too, at last settlement into "wet," "1st quality dry," and "2nd

quality dry" has made the suspicious hill man a little shy of the not now very remote period at which the settlement officers will be noting all additional "seed." Perhaps after 1893, when the present settlement expires, irrigation may advance more rapidly. In Garhwál more or less rain comes every year and "protected" and "unprotected" areas fare much alike, the scarcity in one part of the country being made up by the abundance in another. The cattle in Garhwál have been during the past year, as compared with Kumaon, free from serious cattle-disease. Foot-rot often does mischief, and I attribute the prevalence of this disease largely to the practice the people here have of tethering their cattle in the open fields with the object of manuring the ground; the animals thus tethered often stand for hours in wet mud and suffer from fever in the feet."

There are immense pasture lands both in the hills, Bhábar and Taráí. In the former the tracts towards the snowy range have the reputation of bearing most luxuriant and nutritive crops of grass. Immense flocks of goats and sheep are kept there during the rains. In the Dúns and Bhábar at the foot of the hills the greater portion under Garhwál is preserved by the Forest Department and grazing is prohibited: in the eastern Bhábar grazing fees are levied, which amount to a considerable sum. In the Taráí immense tracts are occupied by little except pasture lands.

Batái, or division¹ of produce, writes Mr Traill, takes place
 Rent. commonly in the newly-cultivated villages,
 or with the newly-settled cultivators in the
 old villages; where from the uncertainty of produce the cultivator is unwilling to engage for a specific sum. In these cases, the rate of *batái* is previously fixed, either by written or verbal undertaking, and the landholder has usually too much interest at stake to be the first to infringe the agreement. The system of *kankut*, or as it is here termed *kut*, exists in lands held in tenure of *thát* during the government of former Rájás; in these grants the rate of cess demandable on the gross appraisement is sometimes mentioned, and where omitted it is easily ascertained, from long prescription and established usage, to the present time. From a consideration of the above circumstances, I am led to conceive that the rights of the cultivators are already fully secured in this province; and that their interests cannot now be endangered so long as it be an established maxim recognised by the Civil Court, that the landholder can demand no more from them than the actual proportional revenue due to Government.

¹ To Board, 15th February, 1890.

The most general mode, however, is by *naydi* or money rents; indeed in the old-established villages the office of landholder is, as regards the duty of collection, a perfect sinecure, as the cultivators who are generally proprietors of the land in their possession usually pay their quota of assessment direct agreeable to the amount fixed at the settlement. In cases when the engaging landholder receives the rents in the first instance, he can make no demand beyond the actual land-revenue, and were such a demand made it would not be complied with, as his dues are fixed and ascertained by local prescription and long-established usage.

The value of land sold by order of the Courts varies very much according to locality: near Srinagar and Páori, and where waste land is scarce, in Garhwál it fetches from Rs. 60 to Rs. 80 an acre, while in other places it does not fetch more than Rs. 40. Near Almora it has been known to fetch as much as 175 times the Government revenue. In the Bhotiya maháls, where a prejudice exists against purchasing a fellow Bhotiya's land, the price is often not more than eight to 10 times the revenue. The old *sayána* families have owing to our system become much impoverished, and have now very little influence; but there never has been and never can be any very rich proprietors in the hills. The average revenue paid by the proprietors is from three to five rupees in Garhwál; while a man holding an amount of land assessed at fifteen rupees is considered a large proprietor. Still sales for arrears of land revenue are unknown, and transfers under the orders of the Civil Courts are neither numerous nor important, other than those due to inheritance or gift. The people are not generally in debt in the hills, and not at all in the Bhábar. Those that are in debt owe their position to expenses incurred in purchasing wives for themselves or their sons, or in redeeming some hereditary land to prevent an outsider getting it.

Pancháyats for the settlement of social disputes have long been known both in the hills and among the Thárus and Bhukás of the Taráí. They are now usually assembled for the settling of cases of abduction or seduction of women, or offences against caste. Witnesses are heard on each side, and the award given is usually submitted to. A fine is often imposed and a feast given to the assembled brethren at the

expense of the offending party. In the Taráí, it would appear that the system is falling into disrepute, and the people prefer that cases of this kind should be referred from the District Courts to arbitrators chosen by the parties to the suit. This is not to be wondered at, when a decision giving the offending woman over to the umpire has been pronounced by the local tribunal. The Chaudhri system has been abolished for some years in the hills and is only a local and unrecognized institution in Káshipur, the only large town in the Taráí.

In 1821, Mr. Traill estimated the population of Garhwál at 6·5 per house to amount to 125,000 souls, an excessive figure all considered. There were no further enumerations until 1841-42, when Mr. Batten gave a total of 131,916 souls, of whom 42,698 were men, 28,836 were boys, and 60,382 were females. Distributed otherwise there were only 366 Musalmáns, and the rest were Hindus, classed as Brahmans 29,122, Rájputs 44,470, Khasiyas 34,502, and slaves 1,358! The next enumeration was in 1853, when there were 67,311 men, 51,968 boys and 116,509 females; total, 235,788. The next enumeration followed five years after, when there were 66,170 men, 53,257 boys and 113,299 females, or a total of 233,326 souls. I omit the census of 1865, which was faulty in many particulars, and record the result of the census of 1872. This gave a total of 310,282 souls (154,537 females), of whom 24,460 males and 23,102 females were twenty years old and under. There were 308,398 Hindus, 1,799 Musalmána, 65 Native Christians, and 26 Europeans, nearly all of whom were agriculturists. The census of 1881 gives a total of 345,629 souls (174,874 females), of whom 343,186 (174,171 females) were Hindus, 2,077 (538 females) were Musalmáns; 26 were Jainas (?) and 297 were Christians. Of the males 390 were employed by the Government; 1,391 in Hindu religious establishments; 102,473 in agriculture; 3,052 in working and dealing in textile fabrics; 2,128 in food and drink; 183 in animal substances; 771 in vegetable substances; 2,225 in mineral substances; 561 bricklayers and carpenters, &c.; 2,749 labourers and servants and 118 others. There were 3,582 villages with less than 200 inhabitants; 270 with from 200 to 500 inhabitants; nine with from 500 to 1,000 inhabitants, and only one with more.

The census statistics of 1872 show 81,038 Brahmans in Garhwál, of whom 62,803 are set down as of the Gangári division; 6,565 Ojhas; 7,291 Khaisiyas; 1,988 Sarolas, and 1,542 Jais. In 1881, the figures give simply 77,960 Brahmans (39,826 females). The Gangáris are inferior to the Sarolas and are so named from living on the banks of the Ganges. Those who have settled in Cháudpur and Lohba call themselves Sarolas however, and it would appear that the latter are the section of the Brahmans living along the Ganges who obtained employment at the courts of the petty Rajas. The offspring of any Sarola who sinks by intermarriage with a lower family become simply Gangáris. The offspring of a Sarola and a concubine also becomes a Gangári. Thus if a Gairola, a sub-clan of the Sarola, marries, his offspring by his lawful wife will be called Sarola-Gairola, whilst his offspring by a concubine are called Gangári-Gairola.

Indeed the inhabitants of the sub-divisions away from the river call all the people living along the Alaknanda, whether Brahmans, Rájputs, Baniyas or Doms, by the generic name Gangári or Gaugál, and there is no marked line of difference between the Sarola and Gangári. The principal sub-divisions of the latter are the Ghildyál,¹ the Dádai and the Malási who came from the Tarái. Two explanations are given of the superior position generally assigned to the Sarolas; one that they were selected as the parent clan to prepare food for the Rajas of Garhwál, and hence their name; another is that when a standing army became necessary they were appointed to cook for the troops in the field by Raja Abhaya Pál, who further enjoined that all should eat from one vessel the food prepared by his Brahman cooks, a custom generally observed to the present day. All the Brahmans in Garhwál are commonly styled Gangáris, but the better classes call themselves Sarolas, amongst whom the following sub-divisions are found:—Kotyál; Simwál; Gairola, usually cooks; Kanyáris, attached to the civil administration of the Rajas; Nautiyáls, teachers; Maithánis, servants; Thapalyáls;

¹ The Ghildyáls serve at the temple of Kana-mardini Delt; the Uayáls at the temples of Mubikh-mardini, Kalika, Kájrásawari. Ghárári and Damanda Uayál; the Aswáls at Jwápa and several Bhadrava temples.

Ratúris ; Dobhals ; Chamolis ; Hatwáls ; Dyondis ; Maláguris ; Karyáls ; Naunis ; Semaltis, cooks ; Bijilwára ; Dhuinánás ; Manúris ; Bhattalwáls ; Mahiuya-ke-Joshis and Dimris.¹

Most of these names are derived from the *thát* or village of origin of the sub-division. The Dimris are the cooks of Badrináth and the food prepared by them may be eaten by all classes. Some are temple priests and claim to belong to the Dravira division, the Kasyapa *gotra* and Madhindhiniya *sakha* and to follow the Yajur-veda. Many Dimris claim a southern origin for themselves, and others state that the Dimris are the offspring of the celibate Ráwals of the temple and the Brahman female attendants who settled in the village of Dimar, and hence the name. They are now the servants of Badrináth in particular and some have taken to agriculture, whilst others wander all over India, asking for alms and selling images of the deity stamped on metal or exposing them for the worship of the faithful. Their principal villages are Dimri, Raigaon and Umatta. The

Ratúris derive their name from Ratúra, a village of Chandpur, and claim to have come there from Maharásutra in the time of the Pála Rajas to visit Badrináth and to have remained in the service of the Chandpur Raja. They belong to the Bharadváj *gotra*. They now occupy themselves with agriculture and service and as priests. They and the Dimris intermarry with other Sarolas. The Gangáris, like the Khasiyas, serve in the temples of the village deities and as priests of Bhairava ; but the Sarolas, though not very orthodox in their ritual, only worship the orthodox deities. The Garhwál Brahmans have a reputation for gaining their ends by servile flattery, and the Khasiya section are reckoned so stupid and stubborn as to be only managed by fear ; hence the proverb :—

“ Garhwál sanda data nahin bina láthi detá nakta.”

The Nirolas are considered to be somewhat lower in the social scale than the Sarolas and contain in themselves in a separate class a number of sub-divisions known generically as Dubhági, for they neither eat from the hands of either Sarola or Gangári nor inter-

¹ The Nautiyáls, Maithácis, Kanyuris, Ratúris, Gairolas, Chamolis and Thapalyáls call themselves Gaur Brahmans, whilst Dimris, Semaltis, Hatwáls Kotiyáls and Lakheras claim to be Draviras whose ancestors came here to prepare the *śhoy* or consecrated food of the idol at Badrináth.

marry with them. They are found in the Nágpur parganah from Rudrprayág to Kedárnáth. They have several *gotras*, such as Kasyapa, Angiras, &c, and hence the name Nánagotri given to them. Their principal sub-divisions are:—Dhúsáli, Jamlogi, Batanwál, Kandhari, Baramwál, Silwál, Poldi, Bilwál, Garsára, Thalwál, Gugleta, Kimoti, Maikota, Darmwára, Dyolki, Kandyál, Thalási, Phaláta, Gatyál, Dhamakwál, Sanwál, Managwál, Bamola, Binjál and Gauri. Most of these names are derived from some village. All intermarry with each other and now follow agriculture, service, peddling and providing for the wants of the pilgrims to Kedárnáth, who are regarded as their legitimate prey and shorn accordingly. The Nirolas have a bad reputation in this respect, and hence the sayings:—

*Anyayopárjitam dravyam dasavarsháni tishtháti,
Práptachaiś dasa varshé samúlamcha vinasyati.*

‘The hoard of ten years (of the cheat) perishes in the eleventh.’

*Dukhddi jo hota hai hard bhard nahi hoy,
Jaise tarwar bet ka phulai phalai na hoy.*

“The oppressors shall not succeed in house or suit,
Like the rattan he shall have no flower nor fruit”

The Naithána Brahmans belong to the middle class and Bharadvāja *gotra*. They ascribe their origin to Jwálapur near Hardwár in the Saháranpur district, whence they came some thirty generations ago and took service with Raja Sona Pála.¹ They belong to the Gaur division and owe their name to the *thát* village of Naithána. They are distinct from both Sarola and Gangúri, but the better class of Naithána Brahmans intermarry with the former and the poorer with the latter. They affect service especially and were formerly employed by the Rajas as inferior clerks to the Dobhál and Kan-yúri diwáns and are now found both in Government service and in that of the Tibri state. The Bharadváj *gotra* seems to be the favourite one in the hills for all the Khasiya tribe converted to Hinduism and who never thought of belonging to a *gotra* before, just as, in the plains, all Hindu converts to Islám become Shaikhs and with time and money may become Sayyida with a genealogical table ready prepared by an indigent Maulvi showing their direct

¹ Gaz. XI. 446.

descent from the prophet. These pious frauds are, however, not unknown in Britain and serve to show that this weakness is common to human nature all over the world. The Kanyúri or

Kanyúris, Khandúri Brahmins belong to the Saunaka *gotra* and Madhandhiniya *sákha*. They are

so called after their *thát* village of Kanyúra in parganah Cháandpur. Though ranked as Brahmins, they are called hill or pahári Káyaths or writer caste and have been for many generations diwáns and kanúngos in Garhwál and still supply members for the latter office. The *gotra* is the same as that of the Raja of Garhwál, who has several in his employ, and a few families of this clan still exist in the Dehra Dún. A couple of Gaur Brahmins from Benares came

Bughánas, to Garhwál about two hundred years ago and settled down in the village of Bugháni,

which they obtained free of revenue. Some say that the Bughánas have the same origin as the Naithána Brahmins and are a portion of the immigration from Jwálapur. They have the same relations with the Sarolas and Gangáris and still hold a village free of revenue as *muáfi*. They are intelligent and when educated make useful clerks and official.

The professional priesthood may be divided into two classes—the personal spiritual preceptor or purohit and the temple priest. Neither class has a good reputation and both are the objects of numerous lampoons attacking them for debauchery, cheating, lying, and an utter disregard of the principles they are supposed to teach. Hence the phrase—

“*Khudra fujhat digare nasthat.*”

Wicked yourself, you teach others.”

And again—

“*Ac rande rande haho daho apán randile kurtiya rahho.*”

“You keep mistresses and yet you preach purity.”

They eke out a livelihood by cultivating the small grants of revenue-free lands in *gánt* usually attached to each temple and have by prescription a right to certain portions of the offerings and to dues on festal occasions, marriages and births and other rites. The principal sub-divisions of the Pujáris or ‘officiating priests’ are Khajyúras, Dubes, Bharotras, Barsotras, Pangotras, Sudans and Bhattas; the last corresponding here with the Mahábrahman of the plains, whose

principal duty is attending to funeral ceremonies. The Garhwál Joshis all ascribe their origin to Kumaon ; some from Joshiyána village near Hawálbágh, others from Jhijár, Joshis, Galli and Joshikhola in Almora. Where they know their *gotra* and *sákha*, it is the same as in Kumaon, but here they intermarry only with the Gangári and Nánagotri Brahmans and not with the Sarolas. In Garhwál the name Upréti becomes corrupted to Kukreti : so Joshi becomes Jusi and Tiwári or Tripathi becomes Tyári. Unlike their brethren in Kumaon, the Joshis of Garhwál are poor and chiefly depend on their profession as family astrologers and cultivation.

Another class of Brahmans in Garhwál is called Saknyáni or Shaknyáni, a name also given to the Himálayán tract to the north of the eastern Dún. Common report makes them the progenitors of both Sarolas and Gangáris Saknyáni, and the name is said to be derived from the great Saka race.¹ Others connect the name with a colony of ascetics who lived near Tapuban and Rikhikes ; others again assign the name to a great grove of *sakin* trees, whose bluish flowers were used in worship and which gave the name of Sakinyáni to the *thát* village and Saknyáni to the people. Those who remained on the banks of the Ganges became known as Gangáris. They intermarry with Ghildyála, Unyála, Ingwále, Dádais and Naithána and Bughána Brahmans. There are numbers of so-called Brahman sub-divisions of which little more than the names are known. Some of these names are derived from the villages occupied by them, such as Anethwáls of Aneth village, who claim an origin from the Dakhin ; Chhapaliya from Chapál village originally from Káli Kumaon ; Lakhera from Lakhera village originally Gaur Brahmans ; Chamoli Kirswán and Kaptwán from the Chamoli village originally Śáraswati Brahmans ; Pokharyál from Pokhri ; Saláni from Salana ; Kotyál from Koti ; Mamagái from Mama ; Bhartúla from Bhartáli ; Nainwál from Nail and Dhaundyál from Dhaund. The Jiyáls say that they came with Jiya Ráni on a pilgrimage and remained here Kálás are named from an ancestor and the progenitor of the Purhyáls came from the east. Panjolas

¹ D'Anville's reproduction of the Jesuit map of Tibet prepared in 1708-10 gives the name Sanke Sontou to the hill country north of Dehli and adjoining Piti. Markham's Tibet, lxi.

are of Kanaujiya descent, Utanis call themselves Dubes. Tyáris, Pants and Pándes came from Kumaon, and the Molapas are Bhatts from Benares. These indications sufficiently explain the names in the long list of so-called Brahman castes in Garhwál, which may be divided into the indigenous or Saka, comprising those recorded as the Sarola, Gangári and Khasiya and the immigrants from the plains.

Amongst the professional priesthood those of the fraternities called generically Jogis occupy an important position in Garhwál. Under this term we include Náth-kánphata, Biná-kánphata; Giri, Puri, &c., of the Dasnámis, Jatádhári, Aghori, Paramahansa, Gurudasi, Sádhu, Brahmachári, Sanyási, Rámánandi, Bairági, &c. These may, however, be reduced to three great classes or

Religious fraternities.

perhaps four; the Gosháins, the Bairágis, the Jogis who serve in the Bhairava temples and others. The census papers show 1,125 Gosháins and 1,063 Jogis in 1872 and a total of 2,620 in 1881. The former are divided into ten classes, each of which has a separate title by way of affix noticed elsewhere¹ and are therefore called the Dasnámí Gosháins. There are four great sub-divisions or schools, each following its own traditional custom or usage which is marked by the following differences:—

	Eastern.	Western.	Northern.	Southern.
Chief math	Rhú Gobardhan	Sarada	Joshimath	Sringeri.
System of religious teaching	Bhogbár	Kitábár	Anandbár	Bhuribár.
Affixes of followers.	Bau, Aranya	Tirtha, Asra	Giri, Parvata, Ságara.	Sárnasvati Bháratí, Puri.
Special holy tract.	Purnahotam, Puri or Jagannath.	Dwárika	Badrináth	Ráncawar.
Special deity (male).	Jagannáth	Siddheswar	Niráyan	Adi-baráh.
Ditto (female).	Vimala	Bhadrakáli	Purnagiri Devi.	Kámákshí (Kamrup).
Achárya	Hastamalaka	Padmapáda	Trotaka	Suresvara or Prithyudhar
Special place of pilgrimage.	Mahodadhi	Gumti	Alaknada	Tungabhadra.
Guru Vela	Prakáśa Rig	Svarúpa Sáma	Nanda Atharva	Chaitanya. Yajur.

¹Obs. XI. 862.

The Tirtha, Ásrama, Sárasvati and Bháratī divisions carry staves and are hence called Dandins. All are eligible for the office of Mahant, the title given to the head of each *math* or convent. All are supposed to be celibates, but as a rule concubines are kept by all, and from their offspring and children dedicated to them their ranks are recruited. The novices are called *chelas*, and when the boy is eight, ten or twelve years old, according to the custom of the branch, he is endowed¹ with the sacred thread (*upanayana*) and the rite² called *churákarana* or shaving of the head (leaving a top-knot) is gone through in the orthodox way. He is subsequently brought to the Mahant and the sacred thread is removed and burned and in place thereof a string of beads (*rudráksha*) or rosary is given;³ the top-knot (*choti* or *sikha*) is shaved off and a *tilak* or frontal mark from the ashes of the burned *janeo* is applied instead of sandal on the forehead of the novice. The Mahant then whispers the *mantra* of initiation and the novice becomes the adopted son of the Mahant or of some member of the fraternity and his *gotra* henceforth is the Atreya. He gives to his spiritual father certain offerings every year which amount to a fair stipend. The clothes worn by the members are of an ochry or dirty brown colour known as *gerua*. The term 'Gosháin' is applied to all fraternities; Dasnámis are addressed as Bábáji, Gosháinji, and when spoken of as Jogi or Mangta. The Dasnámis are scattered all over the district at the various temples, and live on the offerings and the small patches of land attached to these temples free of revenue, and during the harvest months they wander about begging from door to door and sell the proceeds or store them for their support: see further KUMAON. The Puri branch serve at Kumaleswar, Narmadeswar, Nágeswar, Kalkeswar and Naleswar (Girtara); the Giri branch at Briddh-kedár, Bhilwa-kodár, Dattátreya, Sarbeswar and several temples to Durga, Bhawáni and Mahádeo and the Bháratī branch at Rudranáth and Narmadeswar. A Goshain is buried in a sitting posture with the rosary in his hands and in front his books. Sweetmeats for the refectation of the *pret* are placed within, and some salt to protect the body from worms. Over the grave is placed

¹ Ges. XI. 803.² *Ibid.*, 592³ If the novice loses his beads he cannot eat or drink until they are found or until he receives a fresh allotment from his superior.

a small cupola-shaped stone or-tomb, and in this is a recess for lamps which are occasionally burned in his honor.

The Jainas or Saráugis are not correctly noticed in the census reports, but are, for the most part, included amongst the Baniyas, being chiefly traders by profession. Their distinguishing characteristic is their tenderness for animal life. For this reason they drink only water strained through a cloth, and before lighting a fire the wood is shaken and dusted so that no animal may remain therein. They never cook food after dark lest by accident some insect might escape detection in the darkness, and only eat with those of their own faith who observe similar precautions. They possess temples and present offerings of rice, sandal, flower and fruit before the image of Párasnáth and Mahávira, their great teachers. The Sádhus are Jaina Jogis and serve their temples in some places. They use neither conch nor bell in their worship and do not offer cooked food. Many of the families settled for a length of time in Garhwál have the title Mahta, meaning 'respectable,' like the Bhalamánas of the plains. They do not admit others into their temples, as the Jaina deities are all naked and cause scoffing remarks on the part of heretics. Their purohits and gurus are chosen from Brahmans and their funeral ceremonies differ in few respects from the practice amongst Hindus. They marry amongst members of their own faith, such as Agarwálas, Aswáls and the like.

Baniyas or traders are recorded as numbering 3,007 soul in 1872 and 3,657 in 1881. They are Híndus and Jainas by religion and the principal clans in 1872 were :—Aswáls, 1,889; Agarwáls, 374; Chaudhris, 407, besides Bislnois, Dásas and Saráugis. The Oswáls or Aswáls are Jainas

belonging to a separate *gachha* or *gotra* of whom some account has been given elsewhere¹ and being a caste from the plains need not be noticed here. The Agarwáls also come from the plains, from Agroha in the Sirsa district of the Panjúb, and claim descent from Ruja Ugrasena. To them also belong the Dásas and Dhúsara. The Mahearis are also Jainas. The Chaudhris have come from Kumaon and are related to the Chaudhris of Dwárahát and Rawári

¹ Gaz. III., 497.

² *Ibid* II. 395.

in Kairárau. They call themselves Bhárgavas or descendants of the sage Bhrigu, a common device of these miscellaneous low-caste Baniyas. In Dwárahát, however, the Chaudhris attained to considerable influence by reason of their being employed in the civil administration of the Rajas and still furnish some of the Kánúngos of Kumaon. In Garhwál, they are found in Chaundkot and Nágpur, where they intermarry with Khasiya Rájputs. The word 'Chaudhri' is more a title like 'Mihtar', 'Padhán,' &c., than a caste name, but allowed by common use to members of certain families. The Bishnois have been described elsewhere¹ and are all immigrants; the name represents a form of religious faith, not a caste, and is in this respect akin in significance to Saráungi. The sect arose in the fifteenth century near Nagor in Rájputána; they eat in common, but marry only in their several castes. Baniyas, Sonárs, Játs, Gújars, Nais, Khági Chauháns, Juláhas and Chamárs may all be Bishnois and eat together, but marry into their own castes only. They avoid flesh, fish, tobacco, spirits and drugs, and offenders in this respect are expelled. Some even do not eat sweetmeats made in the bazar. They wear the top-knot, but not the sacred thread. Some of their practices tend towards Islám and many adopt Musalmán names, bury their dead and listen to the preaching of maulvis and the reading of the Korán. They are found in Kotdwára and Srínagar and have come there from Nagina in the Bijnor district. They worship fire especially and their principal form of worship is an offering of *ghi* or clarified butter to the fire, the *aghárá-homa* of the ritual in use in the hills.

In 1872, the census records showed 152,065 Rájputs in Garhwál, the principal clans represented being Bhal, 1,997; Bhadauriya, 4,005; Baghel, 4,552; Bharadhváj, 1,496; Khasiya, 58,000; Negi, 15,880; Ráwat, 46,044; Solankhi, 5,314; and Bisht, 4,956. In 1881 the records showed 204,519 souls. The Khasiyas, Negis, Bishts and Ráwats are of local origin and comprise together nearly nine-tenths

Rájputs. of the entire population recorded as Rájputs.

The remainder profess to be descended from
 oians whose origin is traced to some district in the plains. Khasiya
 means a resident of Khasdes, the name common to Garhwál. and

¹ *Ibid* III, 293.

Kumaon, and here I have included the Khasiyas entered under Rájputs and those entered under 'other castes.' Negi means perquisite or due, and was a title given to any one holding military or civil employ under the former Rajas and has been transmitted amongst the Khasiyas as a caste title. Similarly Bisht, or more correctly Visisht, means 'good,' 'respectable,' and is a title, more than a real caste name, like Sáhíb, &c. Ráwat, too, means a sardár or officer, such as a padhán and the like, and has now grown also into a caste appellation. Each of these are further sub-divided: thus the Negis have sixteen sub-clans:—Kála, Ekái, Fateh Bahádúr, Simána, Salárya, Múnda, Baglána, Malása, Khatri, Dogra, Myor, Jagve, Kalini, Nagarkotiya, Pátali and Pharái. The Bishts are divided into Kaphola, Padyár, Hita, Kanhouina, Basnál, Bharela and Sábaliya; and the Ráwats into Ringara, Bangára, Golla and Silála. These last give their names to Ráwatsyún, Ringwarsyún and Bangársyún sub-divisions in Garhwál. The Aswáls of Aswálsyún claim to be Chaubáns: the Bartwáls to have come from Dáranagar; Sajwáns from Jalandhar; Ghurduras of Ghurdursyún belong to the clan of the Raja of Tihri; Myors from Mewár; Mállas from Nepál; Katháyats from Kali Kumaon and Rautelas from Kumaon. Khattris have only recently settled here. The Butolas of Badhán claim to be Tuára from the plains. The Rautiánas of Chaundkot are apparently descendants of Gosháins. Bhandáris are descendants of personal servants of the Raja. Panwárs, Pandíra, Ráthors, Chauháns, Solankhis and others of the more prominent Rájput tribes of the plains have their *soi-disant* representatives in the hills. Besides these there are numerous sub-divisions of the Khasiya Rájput population named after the *thát* or parent village and carrying its name wherever they go: such as Patwál, which gives the name to Patwálsyún; Kaphola, hence Kapholsyún; Bagarwál, Ambána, who were Bhattas of Benares, but here are Rájputs; Rámola, Dánas or Dánavas, representatives of the old tribe of that name; the Khandwáris, Durhyáls, Sunaulas, Dalanis and Bukilas call themselves Ráwats; Boras, Kairas and Choriyas came from Kumaon. All are engaged in agriculture or petty trade. None will call themselves Khasiyas; all style themselves Rájputs and many say that they were settled in their present villages before Brahmans and Rájas came. They

worship principally the village gods, care little for Brahman aid in their domestic ceremonies unless he be a Khasiya, do not wear the *janeo* or sacred thread, and on occasions of joy or sorrow, marriages or deaths, the house is simply purified by cow-dung and cow-urine. The marriage or funeral ceremonies are short or long according to the purse of the employer. They intermarry with each other according to local rules peculiar in some respects to each tract, but not worth recording here.

Out of the total of 308,398 Hindus in Garhwál in 1872, we have noticed the Brahmans (81,038), Rajputs (152,095) and Baniyas (3,007). We now come to the 'different castes' of the census tables, numbering 72,258 souls, the greater number of whom come under the generic term Dúms or Doms. Others are the Márchas of the Painkhanda pargauah, 15,419; Sonárs, 3,349; religious fraternities, 2,500, and prostitutes, 3,183. In 1881, the other castes numbered 54,430 souls, of whom 1,478 were Chamars, 52,000 were Doms,¹ and 292 were Bhangis.

The most important of these different castes is undoubtedly that of the Doms or Dúms, the serfs of the Khasiya race from Afghánistan to the Káli. Wherever the one exists the other is certain to be found. In the census tables they are distributed accord-

ing to occupation, but none the less are the
Doms. people thus distributed Doms, for in 1881

they are returned at 52,060 souls. They are divided in popular estimation into four classes. To the first belong the Kolis, Tamotas, Lohárs, Ors and Dháris. The Kolis in Garhwál were returned at 11,040 in 1872: they weave cloth and keep pigs and fowl and are agricultural labourers. The Tamotas or Tamtas entered at 683 and as Rajputs at 5,761. They represent the Thatheras of the plains and are workers in brass and copper; some work also in gold and also take to agriculture. The Lohárs are workers in iron and numbered 14,322 souls. The Ors comprise both masons and carpenters and numbered 2,800 souls. Dháris, though socially ranked with Doms, do not belong to them, for they properly include only those Khasiyás who have been put out of caste for some offence or another and their offspring form a new caste

¹ In this respect the census of 1881 is far more accurate, for the Doms comprise twenty-three out of twenty-four of the 'other castes.'

with the addition of the avocation of the member. The first class comprises about 34,000 souls. To the second class belongs the Bhúls, Chunyáras, Ruriyas, Agaris and Pahrís. The Bhúls represent the Telís of the plains, but also do field work ; they are also called Báryas and are perhaps the Berbias of the census ; but this title with its 161 souls cannot include all properly classed as Bhúls, though we add the 263 entered as Telís. The Chunyáras are turners and make the wooden vessels known as *theke*, *pálli*, *kathárt*, and also hukka bottoms. The Ruriyas manufacture from the *ningál* bambu various articles, such as the *daliya*, *tokri*, *kanli*, *súp* (various kinds of baskets and sieves) and numbered 2,638 souls. Only 312 are entered as Agarís or miners, or smelters and the like who give their name to the Agar patti near Rúngarh in Kumaon. They are Doms attached to the service of the mines by the former Rajas, but are now gradually exchanging a very-ill paid and dangerous avocation for that of road-makers and other profitable occupations. They used to migrate from Kumaon to all the principal mines in both Kumaon and Garhwál, taking with them their women and children. The Pahrís are the village messengers and perform functions precisely similar to those of the Chamár *goráit* of the plains. They collect supplies, make reports to the patwáris, collect coolies for the roads and the like, and receive in return dues in grain and a small patch of land. The second class of Doms number about 4,500.

To the third class belong the Mallahs, Daryás and Chamárs. The Mallahs are also called Dhunárs and are engaged in agriculture for the most part : they numbered about 900. The Daryás are village sorcerers who conjure away hail-storms and the like and receive dues of grain in Jeth. The Chamárs number 1,011 souls and call themselves Bairsuwas and will never acknowledge the name Chamár. They sew leather and perform all the usual service duties of the Dom. The third class includes about 2,500 souls. The fourth class includes the professional beggars and vagrant musicians of the hills, the Bádi, Hurkiya, Darzi and Dhobi. The Bádi is the village musician, playing on various instruments and singing at the festivals. He also goes from village to village begging from door to door, and belongs to the class of sturdy beggars who, if they do not get what they expect, lampoon the people of the house and abuse them. For

this reason they are to some extent feared and are able to maintain themselves at the cost of their neighbours. They also snare fowl and fish. The Hurkiyas are so called from the small drum or *hurka* which they carry with them. They never take to agriculture, and wander about with their women, who dance and sing. The Darzi, also called Anji and Sôji, lives by tailoring, though also often solely agriculturists: 3,000 are thus recorded. To the Darzi class belongs the Dholi, so called from beating the drum named "*dholak*". This is done by way of incantation to cause sprites and ghosts to enter or to leave the person of any one and so induce that person to give money to the performer. The Daiyá, Bádi, Hurkiya and Dholi are all Doms and are in the hills the recognized priests of the malignant spirits of the hill and glen, whose aid is always sought after, before anything serious is undertaken or any difficult task is attempted. It is the Doms who preserve to the present day the pure dæmonism of the aborigines, whilst the Khasiyas temper it with the worship of the village deities, the named and localised divine entities, and furnish from their ranks the priests. Similarly for the orthodox deities there are numbers of orthodox priests, descendants of those born in the plains and themselves dependant upon the alms of visitors for their livelihood.

The Barhais include some from the plains, but the mass belong to the Or division of the Doms. The Chhnápaz or lime-burners of the census belong to the Agari and Lohár branches of the Doma. The Malláhs or Dhunárs are found on the ferries of the Alaknanda near Srínagar. Doms of the Bádi, Dholi and Hurkiya sub-divisions who take for a livelihood to snaring animals call themselves Baheliyas after the clan of that name in the plains. Nats are similarly those of the same class who wander about as acrobats and jugglers and assume the plains' name of their calling. Stone-cutters frequently come from the plains, but most of them are Doms of the Or class. Mauhárs are, for the most part, Musalmáns; they manufacture lac bangles, an occupation also followed by Doms. There are a few Káyáths from the plains in Srínagar and Tihri Bháts are of two classes, Hindus and Musalmáns, and are found in Nágpur, Pokhri and Bárahayún, where they are known, like the Bádis, to be of the sturdy beggar class, abusing the people if they

do not get what they ask for. The Bogsas or Bhuksas occur towards the Pátlí Dún and some used to live near Srinagar, but the King James of Garhwál having been informed that they practised sorcery and also were in league with those who plundered the pilgrims, called them together and threw them with their books of magic into the Alaknanda. There are a few Játs in Kotdwára and Garariyas in the Bhábar. The Bharbunjas or grain-parchers, Dhnnas or cotton-cleaners, Chhípis or calico-printers, and Kaláls or pedlars are from the plains and are only found in Kotdwára and Srinagar. Dhobis are Doms and there are a few Náis or barbers in Pokhri Nágpur on the pilgrim road. Pajáis or potters (Kumhárs) are found in Dháinak and Chalansyún; some are from the plains and others are Doms. Sonárs are chiefly descendants of immigrants from the plains and use the term Chaudhri as an honorific appellation; they have a bad reputation in their dealings. A Tamol or *pán*-seller may be of any class or caste. It is unfortunate that in our census reports so many avocations have been entered as castes, making confusion worse confounded.

Mention has already been made of the Bogsas or Bhuksas.

Bhuksas.

Elliot records that they are divided into fifteen clans or *gots*, of which twelve are of superior rank and three are of inferior rank. The superior are the Badgujar, Tabári, Barhaiya, Jalwar, Adloi, Dogugiya, Ráthor, Nagauriya, Jalál, Upádhiya, Chauhán and Danwariya. The three inferior are the Dhímar (the offspring of a female oil-presser (Telin) and a Rathor); Dungma (the mother being a hill-woman) and Goli (the mother being a woman of the barber caste). Like the Chamárs, Doms and Páis they borrow the names of Brahman and Rájput clans for their own and in this habit give an additional proof of their not being true Rájputs. Their names are the same as those of Hindus around them with the addition of such names as Páin, Dhani, Mangu and Kákha, common, however, to all the lower castes of the submontane tribes. Their language is Hindi with a few peculiar words as *kandár* for *sál* and the use of *n* for *l*, as *sán* for *sál*, *nath* for *láth*, and less frequently of *r* as *dari* for *dali*.¹ They do not marry into their own *got*, but may take a wife from any other, and those who live in the neighbourhood of the Thárús are said (?) to

¹ Stewart in J. A. S. Ben. (1865), p. 147.

intermarry with them. The Bhukasas of the Bijnor district, however, affect to despise the Thárus. The Bijnor Bhukasas call those to the east of the Rám-ganga Purbiyas and those of the Debra Dún Mehraas. In the Bijnor district, the Bhuksa villages are distributed over the forest along the foot of the hills outside the demarcated forest tracts. The huts are placed end to end with intervals after every group of three or four and the walls are, for the most part, built of split bambu and mud or thatch, of which the roof also is constructed. The floor is well raised and kept very clean and there are two low doors, one leading into the living room and the other from it into the cattle-sheds. The furniture consists of a string cot or two, a thatch mat and some wattle and mud baskets for storing grain.

The Bhukasas of the Garhwál Bhábar are the gold-washers of the Páti Dún. They work in gangs of three or four, each having a separate part of the process assigned to him. A shovelful of the sand is first put upon a little close-set bambu screen or sieve placed over the upper hinder part of a flat tin-wood cradle (*sand*), the lower end of which is open and which has handles by which its upper end can be tilted; water is then poured on the sand from the mouth and lateral hole of a dried pumpkin (*tumr*), the operator stirring the sand with his left hand while he sits alongside the cradle which is raised a foot or two from the ground. The sand having been washed through, the gravel is thrown away, but the screen is left on to equalise the fall of water from the pumpkin passing through it on to the sand which the left hand keeps in motion by stirring it about and raking it backwards towards the upper end of the cradle. After all the lightest of the sand has thus been washed out, small quantities of the remainder are placed on a round slightly hollowed plate of tin (*pharu*) which is dexterously twirled and made to oscillate on the fingers of the left hand whilst the washing is very gently continued. When as little as possible except gold is left, mercury is rubbed with it by hand to take up the gold and the mercury is afterwards dissipated by heat. There is nothing in the appearance of the sand to disclose the presence of gold which is found by prospecting and occurs only in the form of dust.

In all Garhwál in 1872 there were only 1,800 Musalmáns and in 1881 there were 2,077, chiefly traders and servants. In the same

year there were 242 Christians chiefly connected with the American Episcopal Methodist Mission at Páori. This Mission began in 1865 and a bungalow and school-house were built in 1871. The teaching is quite up to the standard in the higher class Government schools, none of which exist in Garhwál. There is also a boarding-house for boys and a girls' orphanage and boarding-house erected in 1872, besides schools-rooms and matron's quarters. It has accommodation for forty girls, who divide their time between study and work. A dispensary was added in 1873, which affords accommodation to a native doctor's family and a few in-door patients and relieves over two hundred out-door patients a month. There are stations in connection with this mission at Chhiphalghát, Kotdwára and Srinagar and branch schools for boys at Srinagar (besides two small girls' schools), Chhiphalghát, Bangár, Gagwára and Koti.

The first convert was baptised in 1867, and in 1884 there was a large colony of Christians, chiefly Doms of the Koli, Or and Lohár sub-divisions, who are encouraged to remain in their village and pursue their usual avocations after baptism. The Mission has done excellent work, and if there were more on the same lines elsewhere, the success of Christian Missions in India would be more assured.

Owing to the lateness of the conquest of Garhwál there was no attempt on the part of the Gorkhális to form a settlement there until 1811 (1219 *fasti* or 1868 *san*). In that year a regular commission was sent from the Nepál darbár consisting of Dasarath Khatri and Bahádúr Bhandári for the purpose of forming the assessment of the land-revenue, which with a few reservations in favour of individuals and temples was assigned in favour of troops, of whom three battalions were cantoned in Garhwál. The assignment was by companies, of which there were five in each battalion, receiving each Rs. 8,672 *G. R.* per annum, and in addition the captain commanding received Rs. 5,005 a year, giving a total of Rs. 1,45,095 *G. R.* to be defrayed from the land-tax and cesses. The assessment of 1811, which continued to be the demand until the British conquest, amounted to Rs. 87,724 *G. R.* (= 65,793 *Fd.*) whilst the actual receipts were for 1811 Rs. 71,819 *G. R.*, for 1812 Rs. 57,735 *G. R.*, and for 1813 Rs. 51,623

*G. R.*¹ = 38,718 *Rd.*) The high rate of this assessment entirely precluded its realisation in full, and as the soldiery entirely relied upon it for their pay, no leniency was shown in its collection, and 'where default' occurred, the families of the cultivators were seized and sold as slaves. Under such a system, cultivation rapidly decreased and what were once flourishing villages relapsed into jungle and became the home of wild beasts. The assessment, however, was in general based on the actual capabilities of each village and for the earlier settlements under the British proved a valuable guide as to what the assets might be supposed to amount to in favourable years.

The miscellaneous revenue collected with and in addition to the land-tax mounted in Garhwál to Rs. 22,145 *G. R.*, of which Rs. 1,147 were on account of *salámi* or *nazrána*; Rs. 454 on account of *mijhdári*, a tax on Doms as curriers; Rs. 1,283 as *tandkar*, a tax on looms; Rs. 1,495 *soniya phágan* or *bhet* on festivals; Rs. 2,401 on mines and mintage; Rs. 1,495 *adhani daftari*, or *kánungo* cess of half an anna; Rs. 10,900 *sáir*, customs and transit duties; Rs. 170 for *kuersál* or *kath* (catechu); Rs. 600 on account of *kathbáns* (timber and bamboos); Rs. 200 other customs duties; and Rs. 2,000 *asmdni farmdni*, from fines and forfeitures. There were amongst these dues an excise on spirits, drugs, soap and tobacco, as well as mintage and ferry dues, a tax on the sale of children and one on marriage. The transit duties were collected at Kotdwára, Bhuri, Bilásni, Sigaddi, Bábli, Kangra and Chobi on the frontier towards the plains and at Joshimath and Tapuban towards Tibet. Until further inquiry could be made these dues were retained at the British occupation, the tax on the sale of children being alone given up.² The police establishment at the passes towards the plains collected the duties³ there and the civil officers those levied at Tapuban. Here sheep and goats laden with merchandise were assessed at three annas per head, those laden with salt at two annas

¹ There are considerable discrepancies between the figures given in the annual reports and those contained in Mr. Traill's Memoir (*Etat. Acct.*, p. 1, app. IV, VI). In the latter, in statement B the land revenue of 1868 was given at Rs. 87,406 *G. R.* and in statement D. as Rs. 91,258 *G. R.* Hereafter I shall take these figures of the memoir, they are the result of more correct information: see to Gardner. 1st March, 1816. ² From Government, 2nd June, 1816. ³ To Government, 29th December, 1815. A Gorkhálí rupee was equal to about 12 annas Farrukhabadi, of which currency 100 = 100·144 present currency.

and unladen animals at three annas a score. These dues yielded altogether about Rs. 4,000 a year in our money. Akin to them were the mintage dues in stamping lumps of copper, which at one anna in the rupee brought in about Rs. 100 a year. The capitation tax on the Doms was remitted as well as a tax on marriage marriages and one on grain in transit¹. In 1816-17 the revenue from these sources amounted to Rs. 3,201 and in the following year to Rs. 3,432. In 1818, Mr. Traill recommended the abolition of all transit duties and the collection of the revenue derived from forest produce in the same manner as the land-revenue or by farm. Both of these proposals were sanctioned by Government:² henceforth, the customs duties on forest produce formed a separate head under the name *kuth* (catechu) and *kath-báns mahdls* and formed the nucleus of the forest department, of which some account has been given³.

It was not until July, 1815 that Garhwál was handed over to the Commissioner of Kumaun, who deputed a native officer to collect information as to the actual state of the country and to receive proposals from the landholders for entering into engagements for the payment of the revenues. Mr. Traill was appointed in Octo-

ber to take charge of the settlement and was
British settlement.

directed to accept the last year's assessment as the basis of his arrangements and to admit where possible the actual land-holders to engagements⁴. Tahsildars were established at Srinagar and Chandpur and a police-station at Dadamandi. Mr. Traill reported that police-stations were unnecessary in the interior from the total absence of every species of crime. The tahsildars were accordingly entrusted with police jurisdiction in their respective divisions. The frequency of robberies, however, in the tract immediately below the hills rendered the presence of a police officer at Dadamandi necessary, and to him was entrusted the collection of the transit duties which were still in force. The first

¹ To Commissioner, dated 15th March, 1816; to Commissioner, dated 23rd March, 1816; from Government, dated 23rd July, 1816; to Government, dated 21st September, 1816; from Government, dated 19th October, 1816. See also Traill's Statistical Sketch of Kumaun, A. Res. XVI (1828); Batten's Report in Set. Rep. II, 514 (Benares, 1863); Beckett's Report (Allahabad, 1866), and Whalley's Laws of the Non-Regulation Provinces (Allahabad, 1870). ² To Board, dated 21st February, 1818; from Board, dated 10th September, 1818; from Government, dated 19th June, 1818. ³ *Sáir* dues abolished, 28th August, 1818. The *kath-báns* or forest dues were retained as having more of the nature of dues connected with and arising from the produce of land. ⁴ Gen. X. 246.

⁴ To Traill, dated 8th October, 1815; to Gardner, dated 26th December, 1815.

settlement of the land-revenue¹ amounted to only Rs. 37,506 *Rs.* and was based on the actual receipts of the year 1811 A. D. Engagements were taken either from the *sayáns* or the smaller landholders for their respective villages and some attempt was made to improve the cultivation by granting leases of waste land on favourable terms. In the following year, the assessment amounted to Rs. 44,224, and at the first triennial² settlement in 1774 *san.* (1817-18 A. D.) the land revenue rose to Rs. 47,821. The settlement, except in Nágpur, was again everywhere made with the village proprietors and a considerable increase in the number of individual engagements was effected. The great distance of Nágpur from the head-quarters rendered it advisable to continue the system of settling with the *sayáns* for another term, but at the second triennial settlement it was found possible to admit the village proprietors here also to engagements. In the Pátli Dún, too, a settlement for one year alone was made, as the receipts were of the nature of forest dues and up to the year 1822 were incorporated in the form of forest produce.

The mode of assessment at the first triennial settlement was similar in all respects to that adopted in the First triennial settlement. Kumaun. Notwithstanding the general lightness of the settlement, it required careful revision to equalise the demand. This necessity arose from the scarcity of cultivators, which rendered it difficult for any landholder to replace losses by death or desertion. Where such occurred the deficiency was made up by immigration from other villages in better circumstances, and as the facts regarding matters of this nature were best known to the landholders themselves, the persons allowed to engage for the revenue of each sub-division were required to distribute the gross demand of the preceding year amongst the villages (a procedure called *darsur*) according to the actual state of cultivation and population, the two great factors in the assessment. To the amount thus arrived at was added the increase demandable from the sub-division on account of its general improvement by a cess of one to three annas in the rupee on the old demand. *Naudbád* villages or those newly brought into cultivation and those in which by collusion or otherwise the former revenue was shown to be inadequate

¹ To Commissioner, dated 1st March, 1816; to Government, dated 31st March, 1816; from Government, dated 30th April, 1816. The revenue is here given at Rs. 37,614 for 1815-16.

² To Government, dated 31st June, 1812.

were not included in this arrangement, but were separately settled on their ascertained assets. These last were confined almost entirely to such as had hitherto claimed to pay a fixed revenue¹. These assessments were uniformly made with the *padhás*, who were remunerated by an arrangement made with their co-sharers in Garhwál and in Kumaon by a grant of land free of revenue and certain dues. The revenue was collected by the *padhás* and by them paid to the civil officers. As a rule in *nauddá* villages the collections were made by *batá* or division of produce and in others by *kis* or an estimate of the produce, but money rates prevailed in all the old established villages throughout both districts².

The second triennial settlement was formed on the same principles owing to the reluctance of the landholders to engage for a term longer than three years. This reluctance was said to be based on the migratory habits of the cultivators, and the landholders were not prepared to engage for a revenue which the desertion of their tenants would prevent them from meeting. Cultivators were scarce and arable land to be had for the asking; so that illness of men or cattle in a particular village often led to its desertion for a time and the fiscal arrangements were not so workable as now and remissions and suspensions not so freely given. The condition of Garhwál differed considerably from that of Kumaon at this period³. Owing to the precipitous nature of the hills it never contained the same proportional area of cultivable land as Kumaon and had always a lighter population per square mile. If to this cause of backwardness be added the wholesale removal of families for sale by the Gorkhális⁴, the comparative slowness of its progress may be readily explained. Little, too, of the wealth which poured into Kumaon at the conquest reached Garhwál. There were then as now no great military establishments and no sanitaría, and the means of communication were too difficult to admit of the export of the surplus produce.

¹ To Board, 14th March, 1821.

² The principal correspondence regarding these earlier settlements will be found as follows:—Trail, to Board, 15th February, 1820; Board Rec., 3rd March, 1820, Nos. 7, 8; *ibid.*, 8th May, 1820; *ibid.*, 14th August, 1821, No. 35; *ibid.*, 30th May, 1825; *ibid.*, 30th July, 1825, Nos. 3-9; *ibid.*, 13th March, 1826, No. 16; *ibid.*, 13th July, 1826, No. 14; 3rd August, 1826; No. 13; 31st August, 1826, No. 15; 25th September, 1826, No. 9; 7th December, 1826, No. 10; 22nd January, 1827; 10th May, 1827; No. 3; 30th August, 1827, No. 26; 1st October, 1827, No. 19; 28th August, 1828, No. 3.

³ To Board, 28th September, 1821.

⁴ See Gaz. XI, 615, 618, 620.

A rise in the price of grain therefore had no effect in Garhwál, and when, in 1831, only twenty seers of grain were procurable for a rupee at Almora, grain of the same quality might be had in many districts of Garhwál at eighty seers for the rupee. The western parganahs along the course of the Alaknanda, and those to the north under the Himálaya, were more favoured in this respect, as the demands of the pilgrims to the sacred shrines of Kedárnáth and Badrináth and of the Bhotiyás for the Tibetan trade were sufficient to consume the surplus produce. The hemp cultivation that had once been a considerable source of revenue had ceased in consequence of the discontinuance of purchases on account of the East India Company. Although some slight increase in the land-revenue demand was possible at the second triennial settlement, it was due not to any appreciable improvement in the resources of the country, but to the fact that the assessment at the former settlements was exceedingly light¹. In Garhwál, as in Kumaon, the habit of deserting a village without any adequate cause was common amongst the cultivators. From the extreme depopulation which took place during the Gorkháli rule the number of deserted villages was considerable and in many of those most recently abandoned the houses were still standing and fit for occupation. Great facilities for desertion were thus provided. Enterprising land-holders convinced of the security of the new Government eagerly sought after tenants to settle in their deserted villages and thus aided the movement; and this with the increased value of land and the increase in the population gradually led all classes to attach themselves to particular places. The land revenue proper in 1820 amounted to Rs. 58,511.

In his report on the quinquennial settlement in 1823, Mr. Traill states that the increase of Rs. 55,600 in the land-revenue of the Srinagar tahsil must be regarded as very small when compared with Kumaon. He attributes this result to the causes already noted—the backward state of the communications and the small demand for agricultural products

¹ Writing in 1831 of the condition of the cultivating classes, Mr. Traill observes that, though such material progress had not been made as in Kumaon, the condition of the people had, however, been considerably ameliorated, and as their assessment was exceedingly low, they would doubtless gradually improve (14th March, 1831). In Nágpur the first settlement was made with the *ayadmas*, the second with the village *padhans*.

in Garhwál¹. The same remarks apply to the revision of settlement in the Chandpur tahsil. The revision of this Sixth settlement.

settlement for a second period of five years in the Srinagar tahsil was made by Mr. Shore in 1829, who also remarks on the disadvantages under which the land-holders in Garhwál laboured from the want of a market for their produce.² The only portion in which much improvement was seen was parganah Talla Salán, and here the progress was entirely due to the breaking up of new lands in the strip of country lying at the foot of the hills. The net result of the revision was a land-revenue of Rs. 67,725. Up to 1826, the plains authorities never asked for an account of collections and arrears (*jama wásilbáki*) nor was any sent. Writing in 1828, Mr. Traill succinctly informs the Board that no *tak dei* advances for agricultural improvements had ever been made, no remissions had become necessary and no balances had accrued, and at the few sales of assessed lands the rights of the holders had brought at public auction six times the annual revenue³. In 1825, Mr. Traill's salary was raised to Rs. 2,500 a month⁴ and he was entrusted with the administration of Dehra Dún with Mr. Shore as Assistant, whose duty it was to take charge⁵ of part of Srinagar tahsili and to reside a certain portion of the year in the hills. Taluka Chandi (*q. v.*) was at the same time received from Moradabad. Sir R. Colquhoun was Assistant in Kumaun, and was succeeded by Captain Glover, and he again by Captain Corbett and Mr. Morley Smith. The Dún was separated from Garhwál in 1829, and in the course of time a new settlement came on in Garhwál. In some cases the same demand

Seventh and eighth settlements.

was continued until Mr. Batten's revision ; in others a fresh settlement was made. In the Chandpur tahsil the revision took place in 1832, with almost the same result as before. In some villages there was a small decrease, due to the desertion of cultivators on account of the death of two influential headmen in Lobba and in others there was a small

¹ To Board, dated 14th November, 1825 ; to Board, dated 6th March, 1826.

² To Board, dated 2nd January, 1829 ; to Board, dated 12th February, 1829.

³ To Government, dated 26th July, 1826 ; to Board, dated 2nd September, 1828 ; to Board, dated 16th June, 1828.

⁴ From Government, dated 17th March, 1825. ⁵ Shore to Government, dated 7th January, 1824 ; to Traill, dated 26th February, 1824 ; from Government, dated 29th September, 1825. Transfer ordered, dated 8th December, 1823.

increase. The average of the land-revenue of Garhwál for the year immediately preceding Mr. Batten's settlement was Rs. 69,254. In 1837 Ensign Ramsay, of the 7th Native Infantry, came to Almora and was appointed Assistant Commissioner on the 28th August, 1840, in place of Captain Phillips, deceased. In 1838 we find Captain Huddleston in Garhwál and Mr. E. Thomas in Kumaon.

The ninth settlement of the land revenue in Garhwál was made by Mr. Batten during the years 1838-41 for twenty years and marks a new departure in the fiscal history of the district. Now for the first time an attempt was made to form a record-of-rights and to formulate a reasonable system of assessment based on an estimation of the actual assets and not entirely on the imperfect guesses of the previous administration. The following table given by Mr. Batten exhibits the assessments of each settlement up to 1833 A. D., and the maximum demandable during the new one on the areas of each pargana as they then stood. Some differences will be found between these figures and those given in the correspondence of the period, due in a great measure to the imperfection of the earlier records and to the fact that villages were transferred from one fiscal sub-division to another, whilst others had fallen entirely waste and been excluded from the revenue-roll:—

Parganahs.	Number of		Assessment in Rupees.							
	Leases.	Villages.	1815.	1816.	1817	1820	1823.	1828.	1833.	1840.
Painkhanda ...	24	46	1,550	1,550	929	1,040	1,091	1,275	1,304	1,294
Badhán ...	167	321	3,671	4,250	4,657	5,781	6,422	6,821	6,918	6,788
Chandpur ...	193	457	5,092	5,916	6,432	7,850	8,991	9,345	9,425	9,190
Talla Salán ...	225	596	3,642	4,146	4,622	5,365	6,892	7,113	7,411	7,183
Nágpur ...	173	413	3,289	3,980	4,324	5,291	6,016	6,178	6,392	6,372
Ganga Salán ...	203	630	5,099	5,609	6,177	7,635	8,957	9,596	9,649	9,618
Bárahayún ...	371	710	5,005	6,142	6,593	8,151	10,102	10,423	10,553	10,659
Dowágarh ...	149	312	1,698	2,211	2,869	3,446	4,207	4,367	4,442	4,530
Chandkot ...	119	241	2,222	2,603	2,909	3,269	3,881	3,950	4,062	4,065
Malla Salán ...	175	476	4,824	5,342	6,043	6,939	8,341	8,748	9,076	8,999
Total ...	1,894	4,103	35,993	41,781	45,546	54,906	64,901	67,723	69,254	68,682
Unsettled (Bhébar).	6	29	...	...	...	6	960	952	816	...
Waste (excluded)	16	28	84	102	114	130	116	110	139	...
Growth and saddle-bari.	...	602	...	...	...	...	...	...	...	...
Mudáfi	...	6	...	...	...	...	...	...	...	...
GRAND TOTAL	1916	4769	36,074	41,883	45,660	55,132	65,977	68,791	70,199	69,682

The details of area of these settlements need not be given, as they were for the most part based on the roughest guesses and are now of no practical value.

We must examine more closely the principles on which the assessment made by Mr. Batten was effected, as they formed the basis of his settlement in Kumaon and were to a great extent recognized by Mr. Bennett in the current settlement of both districts. We shall therefore give verbatim extracts from the records of this settlement, as the matter is too important to be dealt with otherwise. In his report on the settlement Mr. Batten prefaces his remarks thus:—

"On first taking charge of the Garhwál parganahs in 1837 I had every thing to learn in regard to the peculiarities of the hill revenue system and everything to teach in regard to the revision of settlement required. It is difficult to say whether the Garhwál native officials were more astonished at the terms "Regulation IX of 1833," my own title of "Deputy Collector," and my confident proposition of a settlement for a period of 20 or 30 years being about to take place, than I myself was confounded at the circumstance of having to wander over more than 4,000 square miles in order to revise Rs. 70,000 of land-revenue which, I was told, Mr. Traill had, at the last occasion (owing to his unrivalled local knowledge), revised in less than a month, on the road between Hardwár and Badrináth, and that there was neither a village map to help me nor a record of area on which the slightest reliance could be placed."

Brought up in the plains system with its maps and records, it cannot be wondered that the work before Mr. Batten seemed insuperable, and it was not until he gave up the idea of forming village settlements on comparison of rates per fractions of area merely guessed at and saw that the elements of population, communications and nearness to markets which had formed the guides to his predecessor were here as important elements in the question of assessment as rates based on the quality of the land, did he come near any satisfactory conclusion and really commence to work. The revenue-roll forwarded by him for the sanction of Government was "founded on the past payments of each estate or set of estates, viewed in relation to its present state of prosperity, as shown by the state of cultivation; the number, character, and health of the inhabitants; the locality of their possession and their general resources, whether mercantile or agricultural, as fairly proved, according to the opinion of their influential neighbours, consulted in open *panchayat* on the subject."

In explaining his inability to make the assessment on soil areas or on pargana circles Mr. Batten alludes to the existence of the physical fact that :—

“No one patti however small has one natural character for all its villages, and that in fact each village has a separate character, according to its height on the mountain side, vicinity to or distance from the forests ; situation on the mountain or in the valley and, above all, its climate as influenced by these circumstances. Neither are there, for the most part, sets of villages forming one line at one height and other sets forming other lines at other heights ; and though it would be easier to form a jamabandi on a list of mountain-top villages, upper slope, middle slope, lower slope, and valley villages respectively, still great difficulties would occur, without a regular survey, in fixing the real characters of the different lines. Moreover, moral obstacles would be found to separate the different villages of each line more rigidly even than the intervening precipices.”

However acquiescent or indifferent the mass of the people might be to the distribution of the revenue-demand for short periods of assessment, it became quite another thing when twenty years were spoken of. Then each *padhán* began to question the right of other than the settlement officer to fix his share of the revenue burden, and the disputes and jealousy of the members of the *panchayat* who had been accustomed to distribute the assessment arose to such a degree as to necessitate interference, although Mr. Traill, had he remained, might have been able to increase the land-revenue at this settlement. Mr. Batten was right in supposing that it was his first duty to examine into local assets and fix the demand on them only. At the conclusion of his last report in 1833 Mr. Traill recorded the revenue of the province as Rs. 2,34,510 per annum; in 1815 it was only Rs. 1,17,730.

“To his praise be it,” writes Mr. Batten, “and also that he found the province, especially the Garhwál portion of it, fast falling into a depopulated desert owing to the tyranny of its late rulers, and that he left it a comparative paradise, with its inhabitants invoking blessings on his name and on that of the Government which he represented. The duty of his successors was, it appears to me, rather to consolidate the good that had already been done than to attempt with less ability to carry it out, an imitation of the only measure, which, if not originally of a doubtful character, had at least been pursued to its legitimate limits.”

Mr. Batten's difficulties were increased by the practical absence of village accountants or patwáris in the administration and *phard-phants* or rent-rolls which in Garhwál owe their existence to him. He found it anything but easy to discover the

past and present payments of each particular village on which he might base his assessment; but succeeded at length in recording the fiscal history of each from the settlement of 1820 to the year 1840 A.D. His record contains a careful review of the past history of the village in regard to its *padhāns* and its changes from dependence on some other village (*ddkhili*) to independence (*asli*); and again from its solitary position to its inclusion in other villages, and so light was the incidence of the revenue that recourse to farming leases, properly so called, was rarely found necessary during the course of the settlement.

The general rules observed in the assessment subject to modifica-

Principles of adminis- tions whenever local circumstances demanded
tration. ed it are thus formulated by Mr. Batten:—

“1 The consent of the majority of the share-holders in the appointment of a *padhān* remained, as in Mr. Traill's time, the general law

2. This law took absolute effect in all cases where the existing *padhān* had held the appointment only during the period of the expired settlement, and his dismissal was allowed, merely on his failing to acquire a majority of votes.

3. When the *padhān* had held the office for more than one settlement, he was not removed without proof of fault or incapacity; and in the event of such proof being forthcoming, his nearest heir, or at all events some member of his family most agreeable to the villagers, was held to have the first claim to the appointment.

4. In large villages, the shareholders might elect two or more *padhāns*, each to manage his particular division of the estate, and to collect the Government revenue and his own dues from the share holders belonging to his own particular party or clan. In small villages the election of more than one *padhān* was discouraged. The above rules apply to pure *bhāyachāra* estates.

5. In villages where there were few or many shareholders, with the lands not actually divided amongst them, but cultivated by occupancy tenants (*khadyakars*) who were divided among the proprietors (not unfrequently according to their own selection of masters), that shareholder *padhān* who was found in possession of the appointment, or who could show the orders of the court upon the subject, was confirmed, and the claim of his brother shareholders to be admitted to engage with Government was not allowed. But the *padhān* in such cases was strictly forbidden to interfere with the cultivators of any share save his own, he being entitled to collect the quotas of Government revenue from the proprietary shareholders, the latter making their own arrangements for collecting their own quotas from the *khadyakars*.

6. The same rule held good in the case of coparcenary estates, where the lands were actually divided among the proprietors, and where, instead of the *khadyakar* or occupant, the lands might be found cultivated by *puhikdsh* tenants or by *sirthi* (paying *sirthi*) renters.

7. The same rule applied to the case of whole sets of villages included in one lease; but with the villages divided among the several proprietors, except

were on investigation it might be found that among two or three *málguzárs* holding the lease of an estate, the villages placed under the management of each *co-padhán* were found not to correspond with the proprietary rights. In such instances the leases were remodelled and the villages distributed according to the actual possessions of the sharers; or in cases of doubt, and pending the decision of the civil court, according to the voice of the occupant villagers. These last rules apply purely to the cases of proprietary *málguzárs*, with reference to their position in regard to their brother shareholders.

8. The individual who on first redeeming a village from waste obtained the first lease was considered the sole proprietor thereof; and if he or his heirs were still in possession of the lands, he or they could not be removed from the office of *padhán* on the representation of the cultivators, or of the brethren who accompanied the *padhán* at the first settlement of the village, but who did not obtain the lease.

9. The claims to the property in, and management of, such *naudbád* villages set up by persons (not unfrequently *kanúngos*, *patwáris* and their relations) who obtained the first lease of the estate, but who, on failing to redeem the waste, or from any other reasons abandoned the site, and at subsequent settlements left the lease to be given to others, were at once rejected; unless under the most distinct proof of the claimant having continued uninterruptedly to receive some kind of proprietary due (*malikana*) from the villagers, and of the right of the latter to the office of *padhán* having been always considered resumable.

10. The claims of the *thokdar* to the office of *padhán* or proprietary right in *naudbád* lands recently brought under tillage, in opposition to the claim of the real clearer of the jungle, were at once dismissed, except he thoroughly proved that he himself had settled the cultivator on the lands and had incurred expense in their redemption.

11. Such *naudbád* villages (rarely paying more than five rupees a year) have been sometimes included as hamlets of the villages from which the original cultivator came, and in which his hereditary land existed; care being taken either to record the proprietor as one of the joint *padháns* of the whole *mahál*, or, if he did not require that privilege, to register him as the sole owner of the lands. Such were the rules in regard to *naudbád* villages.

12. As a general rule, all hamlets (*dhkhili mauzas*) were kept with the parent (*asli*) villages to which they had stood attached uninterruptedly since the settlement in 1823, except where, by mutual consent, a separation was agreed upon.

13. No village was allowed a separate lease if the records showed that, continuously from 1815, or from the very first trace of its history, its union with some parent village was unbroken.

14. All villages having separate inhabited sites were allowed to engage separately with Government, merely on the expression of their wishes to this effect by the majority of the inhabitants, if their inclusion in another estate took place only at the last settlement, except a distinct decree of court had ordered their inclusion.

15. This rule equally applied to the case of non-proprietary communities occupying the land, but acknowledging some external superior; that is, if the *Ahdyskars* proved that, previous to the last settlement they had enjoyed the privilege of having their own village *padhán*, they were now permitted to elect one

under the same rules as those made for *bhdyachdra* villages which they often resemble in all but the name.

16. In the case of villages having remained as hamlets within some other since 1823 or 1828, their claims to a separate engagement were favourably considered, whenever inquiry proved that their original absorption was owing to some temporary cause now no longer existing, or to the prayer or consent of the inhabitants, and not to any blinding decision of authority. If, however, owing to the conjunction of the estates, a great commingling of rights, interest and possessions had occurred, a separate lease was not granted, but the measure of appointing an additional *padhān* selected from among the villagers of the included hamlet was preferred. These rules were for the adjustment of cases relating to *aali* and *dakhili* villages.

17. The remuneration of *padhāns*, whether in land or dues, or both, was left to the mutual agreement of the parties, and where they could not agree, to a decision by *panchayat*. The *padhāndhārī*, or *hak-padhān*, sometimes called '*jetaunda*' lands, were given over revenue free to the *mālguzdr*; but the quantity was fixed according to the actual facts, and not according to any arbitrary rate on the area of the whole village as formerly; for such allotment, though duly recorded in the periodical settlement books, always remained a dead letter.

18. Where no *hak-padhān* lands were found to exist, none were newly created, except by the consent of the villagers; but if the customary dues were found to be too small, a money equivalent of about one rupee for every sixteen rupees of Government revenue was recorded as the right of the *padhān*.

19. Owing to the republican character of the communities and the strong opposition made to all arbitrary measures, the enforcement of the last-mentioned right, by compelling the shareholders to sign an agreement against their own wishes, was not effected at the time of settlement against their own wishes, but was left to the course of law.

20. With the exception of general rules concerning the public service, the instalments of revenue and the management of "*ambata*" or undivided, and "*taxdri*" or unowned lands and the rights of pasturage, the actual paper agreement taken from the shareholders corresponded exactly to their own system of administration and liabilities, and those discontented with the arrangements and not signing the deed were left to take their remedy or to be sued at law.

21. The villagers were not allowed to vote away or otherwise interfere with the actual possession of their proprietor *mālguzdr* acquired during his holding the office of *padhān* in the case of the said proprietor being now by the operation of the general rules ousted from the internal management of the village by the substitution of a village *padhān* in his place."

Boundary disputes were found far less frequent than was expected: at least three-fourths were settled

Boundary disputes.

without the intervention of authority. In

such cases, the compromises of the parties were sometimes separately filed, but in general the *chaknāmāh* showing the boundaries of each village was signed by the *padhāns* of contiguous villages. In

Traill's book of 'great measurement' boundaries are given, but the reasons for assigning them, or the attestation by which they were entered, are not given. Actual demarcation of boundaries by stone platforms always took place whenever recourse to a legal settlement of disputes had been found necessary. But in the case of amicable agreements among themselves, such demarcation, though always recommended, was not insisted on. Indeed, on account of the villages being placed in such scattered situations, and being so numerous, it would have been very difficult to find officials adequate to superintend this kind of work, and the progress of it would undoubtedly have excited, in many instances, the very doubts and disputes which the measure was intended to guard against. In Garhwál mountains or natural objects are the usual boundaries, Mr. Batten writes :—

"At the time of settlement the Garhwáls were distinctly given to understand that, even where no demarcation had been insisted on the present determination of their respective boundaries was final." "Large portions of waste land, including whole ranges and their vast forests, have been included from olden time in the boundaries of adjacent villages, though not included in their recorded area. No interference with this nominal allotment of waste (except in the case of the Taráí lands) has been attempted at the present settlement of Garhwál. Such a division has been found useful in giving separate tracts for pasture for the cattle of different villages; but the inhabitants have been strictly forbidden, and the prohibition is particularized in the *padhán's* lease, and also in the several engagement papers signed by the shareholders of villages, from levying dues for the privilege of grazing within certain boundaries, unless the custom of paying and receiving them has been immemorial; the burden of the proof of this resting with those who demand such payments. Owing to the ignorance and retarded civilization of the communities and the absence of village accountants, the record of village administration must necessarily be imperfect. I therefore take this opportunity of asserting that the right of Government to all the forests and waste lands, not included in the assessable area of the estates, remains utterly unaffected by the inclusion of certain tracts within the boundaries of villages, and that no one has a right, merely on account of such inclusion, to demand payment for the use of pasture-grounds, or for the permission to cut timber or firewood. Neither does such inclusion interfere necessarily with the right of Government to accept offers for *navabád* leases. But as ordered in the case of the Taráí forests, so in the hills (where, too, *samfádari* claims are rare), the inhabitants of the villages most adjacent to the tract, or having it recorded within their boundary, should have the first refusal of all such leases; and no grant of the kind should be allowed within a certain distance of the cultivated and culturable waste lands of inhabited villages; the distance to be fixed by the district officer after receiving the report of the local *patwári* and *kanúngo* as to the position and extent of the proposed clearing. If proper attention is paid to the subject of

waste lands in Garhwál, and every application for the privilege of redeeming them be carefully considered and decided on with reference to the above-mentioned declaration now made by the settlement officer, I am of opinion that the prosperity of Garhwál, and the advance of its population and agriculture, and finally of its revenue, will be for the future even more satisfactory than during the years that followed the expulsion of the Gorkhális and the return of the peasantry to their ancient homes. In every patti there are one or two villages, very thriving in character, and with surplus members who are available to become *pahkásht* cultivators of neighbouring estates. I have purposely, in the wilder districts (Chandpur, Badhán, Chaprakot, and Talla Salán, for instance) left such villages lowly assessed, in order to increase their wealth, and render them reservoirs, whence its currents can flow and fertilize the vicinity. Let the superfluous members of such communities be distinctly told that a good title will be given with the several patches of fine redeemable land in the forest, and that all fictitious claims to monopoly of the waste have now been repudiated as an usurpation of Government rights, and as only tending to injure the country by increasing the tigers and bears, and I am sure that the offers for new lands will increase tenfold."

The same principles governed Mr. Batten's assignment of the waste in Kumaon and were again formally announced at Mr. Beckett's revision of settlement in both Garhwál and Kumaon and are referred to again hereafter.

The following statement gives the statistics of area of Mr. Batten's settlement¹ :—

Parganahs.	Total area in <i>bis</i> , exclusive of waste and forest.	Revenue	Revenue land in <i>bis</i> .				Rate per <i>bis</i> on total area assessable.	Rate per <i>bis</i> on cultivation.
		and mudfi.	Cultivated.	Culturable waste	Hak padhání.	Assessed total area.		
Painkhanda ...	2,184	17	1,834	246	87	2,167	Rs. a. p. 0 9 7	Rs. a. p. 0 11 3
Badhán ...	13,500	356	7,544	5,062	538	13,144	0 8 3	0 14 9
Chandpur ...	12,789	80	9,371	2,737	641	12,709	0 11 7	0 15 9
Talla Salán ...	11,054	76	8,198	2,489	289	10,976	0 10 6	0 14 0
Nágpur ...	8,400	222	5,950	2,014	174	8,179	0 19 6	1 1 1
Gangu Salán ...	8,478	...	6,613	1,812	53	8,478	1 2 2	1 7 3
Bárah-yún ...	15,103	23	10,648	4,667	68	15,381	0 11 1	1 0 0
Dewalgarh ...	7,008	166	4,521	2,249	73	6,843	0 10 4	1 0 0
Chaundkot ...	3,190	35	2,562	528	64	3,154	1 4 7	1 9 4
Malla Salán ...	7,647	3	6,612	869	163	7,643	1 2 10	1 6 9
Total ...	89,652	979	63,823	22,702	2,148	86,673	0 12 4	1 1 2
Unsettled ...	488	...	40	488	...	488	...	...
Waste ...	366	...	...	366	...	366	...	...
Revenue-free	12,871	12,871	...	...	...	...	...	...
Total ...	103,378	13,850	63,863	23,516	2,148	89,528	...	...

¹ Confirmed by G. O. No. 2749, dated 31st December, 1842.

The following remarks on Mr. Batten's settlement of 1840 are taken from Mr. Beckett's report on its revision in 1864:—

Review.

"In 1840¹ the people generally were poor. There were no roads or markets, and the working classes were only gradually emerging from the state of serfdom in which they had been held by previous Governments. Since then their condition has materially improved, roads have been made, wild beasts have been reduced, extensive clearings have been effected, and all resort freely to the great marts at the foot of the hills at Rámnagar, Kotdwára, Dharon, and Pattiya, where they exchange their own surplus produce for the commodities of the plains. During the past settlement every village had the power of increasing cultivation without being liable to extra revenue. They had further the right of pasturage and of using the spontaneous products within their boundaries and considering that every mile in the district, including the snow ranges, is supposed to be included within the boundary of some village, these privileges cannot be lightly estimated. No villages, however, had manorial rights which authorised them to dispose of timber, claim pasturage fees, or exclude their neighbours who from olden time had enjoyed the privilege of grazing their cattle, cutting wood, gathering leaves, &c. This system may be considered one of the chief causes of the increase of cultivation since 1840. Small hamlets have now become large villages, and villages have sprung up where cattle-sheds only existed formerly." Only 55 villages with an area of 886 *báis*, or about 849 acres, were waste at the new settlement in 1864.

The new settlement was effected between 1861 and 1864 by Mr. J. O'B. Beckett. The great feature of the new settlement is the regular field measurement as in the plains, a real cadastral survey. Every village in Garhwál, with the exception of those in the upper portion of the Bhotiya *maháls*, has been measured and maps with indices to them have been prepared by native surveyors. Even at Mr. Batten's settlement no actual measurement ever took place, but every *thok* or local division of each estate was examined by the surveyor, and the number of *adlis* in it was guessed at. The result was entered in the records, and the totals show the number of *báis* of each class of land in each estate from *nazar anddai*, or guess from inspection, as the system was called. Naturally this system led to much concealment and the difference in the arable area at the two settlements is not altogether due to improvement, but in many cases to restitution. At Mr. Beckett's settlement the *báis*:

¹ See Settlement Report for 1854 (Allahabad, 1860).

of 4,800 square yards, or only forty less than an English acre, was retained as the standard of measurement. Actual survey operations commenced in 1856, but the mutiny put a stop to all operations from June, 1857 to December, 1858; but notwithstanding all stoppages and other difficulties, the total cost of survey and preparation of record-of-rights was only Rs. 74,005. The survey was finished in 1860 and the papers completed in 1861. The area measured was 149,379 *bhis*; therefore the cost per *bhis* is a little under eight annas. The cost of measurement in *gunth*, *mudfi* and *sudabart* holdings was defrayed by the parties to whom they belonged. All terraced land was measured and assessed, but only so much of other land as the villagers desired was measured, but was omitted in all cases from the assessment. The boundaries entered in the great demarcation book of 1823 and which had been upheld at the twenty years' settlement were recognized and remained unaltered. The only changes were in the boundaries of *pattis* and *parganahs*. These were altered to suit the extension of the system of *patwáris* so as to give to each the charge of a compact area. To effect this about 125 isolated villages were transferred to the *pattis* within which they were situate, but which formerly belonged to other distant *pattis* by reason of their being included in the *thokdári* of men who resided there. A large number of hamlets were converted into independent villages at the request of the proprietors, as in many instances the hamlet had become as large as the parent village.

After all the measurement papers had been completed a book was prepared showing the area, cultivation, *Records.* past fiscal history and population. With the information thus obtained and after a personal inspection of each village, Mr. Beckett gave out the assessment in presence of the *padhás* and assembled landholders. In villages where the assets had been fraudulently concealed at previous settlements, a considerable increase was demanded, whilst in others, where cultivation had greatly increased, the assessment was at favourable rates to allow of the people gaining the full advantage from their industry; progressive assessments in such cases were frequently made.

Only three classes of land were recognized, irrigated (*sers*), first and second quality dry and these were entered in the village paper. The produce of irrigated is considered equal to double that of second-rate dry land, and that of first class dry is as compared with second-class land, more valuable by one-third. In a favourable year this calculation may not correctly represent the yield of the three lands above specified; but considering that in dry seasons second-class land produces proportionately less than the good unirrigated land, and that land capable of being irrigated is so far independent of rains as to give, under unfavourable circumstances, even a fair crop, the estimate of the produce of these three qualities of land may be considered sound, though perhaps the irrigated land should have been assessed more highly." In fixing the jama, Mr Beckett remarks that he took "into consideration all particulars affecting the present and the future prosperity of every village. Where a hill-side was steep, the terrace walls require extra labour. Where the women were in excess of the men; where the men were generally old or the male population consisted chiefly of boys; where the land was too extensive for the village community to cultivate, and its isolated position put it beyond the reach of non-resident cultivators (*pahikashis*); where the vicinity of heavy jungle rendered the crops liable to destruction by bears and deer and the cattle were likely to suffer from tigers—these and other reasons induced him, in many instances, to assess land far below the average rate. Hitherto no charge had ever been made for water-mills. As water mills are very profitable, and usually the property of private individuals who monopolize the water and claim rights in it, it was thought only fair that the proprietor, who realized profits, should pay a small rent. Where mills belonged to the village community and no charge for grinding was levied, these were not assessed. In private water-mills a charge of one-sixteenth of the grain ground is made. A mill ought to grind at least two maunds in 24 hours; so that the proprietor would get five *sers* a day. The mill commonly used can be put up for a trifle; in fact the cost of it would be repaid by the receipts of one month. As the tax was new to the people only one rupee was charged for a mill liable to any interruption, and two rupees on those which are at constant work throughout the year. The rates at Srinagar, Rûdrprayág, and some places on the pilgrim road are a little higher."

Sir Henry Ramsay remarks:—"As compared with preceding settlements the present one has eliminated to a great degree from its calculations the item of *previous demand*: in the highly cultivated and agriculturally prosperous part

Census, &c.

of the country, the bearing of acreage on population, and *vice versa*, was a main item of calculation, and in the less populous tracts, or where agricultural assets were found to be subordinate to trading and other casual capabilities, the census, combined with an estimate of the character of the population, afforded the main basis of the revenue assessment. In the Bhot tract of Mala Páin-khanda the revenue may be almost strictly called a poll-tax. A more fair mode of taxation for that tract, and the similar tracts in Kumaun proper, might be on a correct enumeration of herds of cattle and flocks of sheep; but Mr. Beckett, with all his personal activity and local knowledge, found that

concealment of such assets was possible to a large extent, and that the counting of the profit-earning and revenue-yielding *humau* item was an easier task "

Cesses had never before been levied, but the people had been taught to expect a more elaborate record and the machinery for its preparation and custody had to be provided for by an extension of the *patwári* system and the allotment of smaller areas. Every *patwári* now is a trained surveyor and the civil local referee in all land disputes. The numbers were increased to 44, paid at ten rupees a month from a four per cent. cess on the land-revenue. Owing to the increase in the postal service, the duty of carrying the mails which lay with the inhabitants of the villages along the principal lines of road had become exceedingly onerous. Those villages along the main lines of communication had to carry a mail every day if they received no aid from those more distant and where they did receive aid, men had to come from considerable distances. Personal service was accordingly abolished and a cess of three per cent. on the revenue provided for a paid staff of runners and distributed the duty equally over every village. Schools in the interior were unknown and a three per cent. cess was also established for this purpose and gave 58 schools to the district. Personal service for the repair of roads has always been required and that system has been retained, care being taken to effect the repairs when the people are relieved of the more pressing duties in the fields. The general result in the despatch of reports and receipt of orders in police cases has been strongly marked, and, in addition, every village can without charge communicate by letter with any part of the district. The revenue is paid in four instalments, three falling on the autumn and one on the spring crop. The *padhán* always pays in the first instance, whether he has been paid by the other proprietors or not, and he then recovers from them, if necessary, by a summary suit. It is found that if any proprietor's share be sold, it is usually at the suit of some creditor who has lent money to meet the Government demand. In the last few years, there have been only 251 transfers by gift or sale among the 31,118 recorded proprietors in Garhwál. Sale for arrears of revenue is unknown.

The following table gives all the information about the current settlement that appears necessary :—

Parganah.	Number of		Assessable area in acres.			Land-revenue.	Population.	Rate per acre on		Mills.				
	Estates.	Villages.	1883 estimate.	1889.				Total area.	Cultivation.	Number.	Rent.			
				Cultivated.	Waste.									
			Rs.			Rs.		As. p.	Rs. a. p.		Rs.			
Bārahayūn ...	506	640	16,194	25,728	3,471	16,644	33,551	9	5	0	11	135	75	
Badhan ...	325	374	14,171	7,761	1,514	6,803	16,579	13	2	1	0	405	688	
Chāndpur ...	298	414	12,924	12,687	1,760	10,170	22,180	11	5	0	13	399	481	
Chāndkot ...	164	237	4,025	10,580	881	7,136	18,516	10	4	0	11	3	89	10
Dewālgarh ...	369	392	9,144	9,364	871	8,005	18,644	13	2	0	14	5	154	237
Dasoli ...	102	142	4,269	3,361	1,854	...	7,100	10	9	0	16	9	179	329
Nāgpur ...	573	561	12,457	13,633	1,983	9,288	28,048	13	3	0	15	2	374	520
Paikhandā ...	46	76	3,453	3,452	690	1,049	6,523	13	11	0	14	5	102	213
Ganga Salān ...	395	499	8,997	20,965	1,313	13,813	29,472	17	0	1	1	4	145	60
Malla Salān ...	285	411	7,600	14,212	884	21,611	29,099	10	0	0	10	8	89	24
Talla Salān ...	435	580	11,528	14,334	1,183	11,192	24,708	12	7	0	13	5	41	4
Tota ...	3,116	4,417	1,04,362	134,747	16,073	96,311	230,632	11	10	0	13	9	2,008	3,523
Measured total,	...	4,395	1,02,921	133,915	16,444	95,546	228,295	11	5	0	13	9	2,008	3,523
Waste ...	...	57	856	...	...	...	79	...	...	...	...	...	...	...
Forest ...	...	83	1,569	...	...	...	800	...	...	...	...	30	120	...
GRAND TOTAL...	3,116	4,567	1,06,787	...	...	96,311	231,786	11	5	0	13	9	2,038	3,643

The present Government demand amounts to Rs. 96,311 and Rs. 3,626 from the *saddart* pattis. The settlement expires in 1890-91.

The following table will show how this settlement has worked, as it gives a statement of demand, collection and balance of land-revenue on the roll from 1872-73 to 1882-83 :—

Year.	Demand.	Collection.	Balance.	PARTICULARS OF BALANCE				Percentage of real balance to demand.
				Real.			Nominal.	
				In train of liqui- dation.	Doubtful.	Irrecover- able.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1872-73 ...	95,579	94,315	1,264	1,244	20	...	...	1.32
1873-74 ...	95,579	95,111	468	458	...	...	...	.49
1874-75 ...	95,579	94,714	865	720	...	145	...	.91
1875-76 ...	95,559	95,314	245	245	...	...	...	.25
1876-77 ...	95,559	94,779	780	740	...	...	40	.77
1877-78 ...	96,186	90,576	5,610	5,610	...	...	...	5.83
1878-79 ...	96,186	89,931	6,255	6,255	...	...	...	6.49
1879-80 ...	96,176	94,085	2,091	2,035	...	...	56	2.11
1880-81 ...	96,140	94,532	1,608	1,566	...	43	9	1.67
1881-82 ...	96,122	95,271	851	751	52	...	48	.82
1882-83 ..	96,074	95,086	988	951	...	...	37	.99

The tenures, village officers, such as *sayánas*, *kamíns*, *padháns*, and *patwáris* are described under Kumaon and need not be referred to here. The revenue-free grants, however, require some separate notice. In the year 1868 Saka, corresponding to 1811-12 A.D., Bakshi Dasarath Khatri and Kázi Bahádur Bhandári were deputed from Nepál to make the settlement of Garhwál and resumed nearly all the estates held free of revenue for which no sufficient authority was forthcoming and granted to those who were confirmed in their possessions certificates to that effect. The entire province was then assigned for the support of the military, and no grant therefore of a subsequent date, unless originating from or confirmed by the court of Nepál, could have been held sufficient to alienate lands in such an assignment. It was accordingly ruled that all such invalid grants should be resumed, and Mr. Traill was directed to inquire into each case and report the result to Government. Certain sums were also paid to various temples and individuals from the proceeds of the transit tax at Srínagar; claims to a participation in these dues were also examined into and decided on the same basis.¹ The general result showed 501 villages held in *gúnth* free of revenue for the support of temples and 27 as *mudfi* by individuals. At the close of 1840, the *mudfi* holdings comprised 163 *báris* and the *gúnth* lands amounted to 13,651 *báris* of culturable land, of which 943 *báris* formed parts of villages which paid revenue to Government and included the *sadábart* assignments. The rights then established were confirmed formally by Government,² and at the recent settlement the inquiry was finally closed by an examination of the claims to hold small patches of *gúnth* free of revenue and all who could prove their claims were confirmed in possession—

The following table shows the revenue-free holdings as at present recognised :—

¹ To Government, dated 19th April, 1816; to Government, dated 22nd March, 1816; to Government, dated 26th March, 1816; from Government, dated 30th April, 1816; to Government, dated 20th May, 1816; from Government, dated 11th June, 1816; to Government, dated 23rd May, 1816; to Government, dated 25th July, 1816; from Government, dated 10th August, 1816. ² From Traill, dated 7th March, 1816; to Government, dated 15th March, 1816; to Government, dated 19th April, 1816; from Government, dated 18th May, 1816; to Government, dated 6th May, 1816; from Government, dated 25th May, 1816. ³ 2044 of 18th October, 1859.

Gāth grantees.	Villages.	Area in bāis.		Nominal assessment in rupees.	
		1823.	1863.	Former.	Present.
Badrināth ...	242	4,765	4,372	3,777	3,943
Kedārnāth ...	54	775	967	948	857
Kamaleśwar ...	14	233	267	186	248
Lachminārāyan ...	5	102	126	77	109
Raghunāth ...	8	108	166	67	107
Tungnāth ...	9	133	189	82	123
Gopēśwar ...	6	122	254	239	243
Small grants ...	165	1,449	1,783	668	1,506
Waste ...	12	39	...	...	...
Total ...	535	7,845	8,074	6,037	7,136

Madfi grantees.	Area in bāis.		Nominal assessment.	
	1823.	1863.	Former.	Present.
J. Henry ...	62	168	18	115
Balmukand ...	35	69	40	86
Amar Singh ...	78	92	39	36
Chintamani ...	20	21	25	16
Small ...	21	25	...	40
Waste ...	10	...	...	...
Total ...	226	365	115	263

Besides the endowments assigned for the support of temples are the *sadābart* grants or endowments for the support of pilgrims, the most important of which had their origin not many years before the introduction of British rule. In 1854 *san.*, corresponding to 1797 A.D., the revenues of parganah Katoli in Kumaon, assessed in 1816 at Rs. 1,173, were devoted by Rāja Ran Bahādur Sāh of Nepāl to supplying grain to pilgrims proceeding to Badrināth and the proceeds were distributed at the dharmśāla built by Chauntra Rudrbir Sāh at Pipalkoti. In 1870 *san.* (1813 A.D.) a further grant was made of

the revenues of parganah Dasoli in Garhwál by Rájá Ráj Indra Bikram Sáh of Nepál to the temple of Badrináth, valued at Rs. 1,315 in 1816, which were distributed at the temple itself to the pilgrims visiting it. For the same purpose the revenues of parganah Mahryúri in Kumaon, valued at Rs. 1,006 in 1816, were assigned to the support of pilgrims proceeding to Kedáruáth by Rájá Ran Bahádur Sáh in the name of his wife Kant Bháti in 1797 A.D., and were distributed at Wála Patan in the dharmasála built there by Cháuntra Bam Sáh. Parganahs Painkhanda, Bámsu and Maikhanda, assessed at Rs. 1,126 in 1816, were similarly assigned in one grant by Rájá Ráj Indra Bikram Sáh in 1813 A.D., and the proceeds were distributed at the dharmasála built by Iliya Báí, aunt of Jaswant Ráo Holkar, at Chaupatta below Tunganáth and at Patogarh. The total value of the assignments was therefore Rs. 4,620.

The grants¹ were addressed to the occupiers of the assigned lands, directing them to pay the dues of Government according to the settlement to the officers entrusted with the administration of the charity, who were on the other hand warned not to exact more than the fixed demand entered in the grants. The object of these assignments was to afford to every pilgrim who chose to demand the benefit of the charity a certain amount of food at five specified places on the roads to the temples. Minute instructions were given as to the quantity each pilgrim could claim and rules were laid for the administration of the charities and the remuneration of the persons appointed to superintend their distribution. It was also ordered that any surplus funds that might remain should be suffered to accumulate in order to meet the contingency of a larger number of pilgrims visiting the temples in any particular year. In 1816, the management of these charities rested with the Rawals or chief priests of the temples. A grant of precisely similar character of the village of Kholi and seven other villages not far from Sínagar was made at a much more remote period by the Rájás of Garhwál; the exact date is not known, but it was confirmed by the Nepálés and recognised by our Government. These villages were

¹ To Government, dated 31st March, 1816; from Government, dated 20th April, 1816; to Government, dated 23rd May, 1816; to Mr. Fraser, dated 8th June, 1816.

assessed at Rs. 237 in 1816. At the British occupation the source of income at Kedárnáth and Badrináth consisted of (a) revenue from *saddbart* funds, (b) offerings of pilgrims at the shrine itself, (c) rent in money and kind from *gúnth* lands, and (d) the property found on the bodies of persons dying in the neighbourhood of the temples.

The officers of Government never interfered with the last three sources of income. Mr. Traill, however, **Management.** entirely separated the administration of the *saddbart* endowment from the temple funds and soon found that the assigned revenue of Badrináth considerably exceeded the expenditure on the two charities at Pípkoti and Joshimath. In 1816, he recommended to Government that the surplus proceeds of the *saddbart* assignments of both the Kedárnáth and Badrináth temples should be devoted to the formation and repair of good roads to both the temples, the suffering and actual loss of life to the pilgrims being represented as very great. The Government sanction was withheld on the grounds of offence to religious prejudices, and it was at the same time directed that no misappropriation of the assigned revenues should be permitted. Sítarán, the Ráwal or head-priest of Badrináth, died in 1817 and was succeeded by Náráyan Bhát, during whose administration the incapacity and malversation of the temple officials induced Mr. Traill to take the management of their temporal affairs into his own hands. He appointed superintendents to manage the doles, and seeing that the clause directing the surplus funds of short years should be accumulated for the extra expenditure of the years when pilgrims arrived in large numbers had fallen into abeyance, and that no advantage was likely to accrue from its revival, determined to apply the surplus funds to the improvement of the roads to the sacred places for which he had in vain solicited sanction. Accordingly, having for a few years allowed the surplus funds to accumulate, in 1827-28 he commenced, through the landholders, the road¹ from Hardwár to Badrináth, laying out the greater portion of it himself, and for this purpose undergoing dangers that few men would care to encounter. The work was completed in about seven years,

¹ To Board, dated 18th September, 1829.

and in the three years following, that is up to 1835, roads were also constructed from Rudrprayág to Kedárnáth, from Ukhimath to Chimoli and from Karnprayag through Chandpur and Lohba to Rohilkhand. These roads are about 300 miles in length and were constructed at a cost of Rs. 25,000. In 1840, the income of the fund amounted to Rs. 2,685 and the expenditure on the pilgrim doles to Rs. 1,197, leaving a balance of Rs. 1,488 for the road fund, besides an accumulated surplus of Rs. 4,600 intended for widening the roads.

Mr. Traill, though he deserved the highest praise from philanthropists for his energy in constructing the pilgrim road, rather strangely left off his labour at the very point where a road was most wanted, *viz.*, between Joshimath and the Níti pass, and almost totally neglected all roads between Almora and Garhwál, Srinagar and Najibabad and other important parts of the country. His successors endeavoured to rectify these omissions, not however without having recourse to the *corvée* system, to which Traill was probably averse and not without reason. In 1840, the road to the Níti pass was commenced and other roads continued to be constructed until Mr. Lushington in 1841 again handed over the entire funds and their administration to the Ráwals.¹

In 1840, Dr. Playfair² visited the temples and found the condition of the pilgrims miserable in the extreme. Disease was exceedingly common amongst them, due in a great measure to want of food, old age, previous sickness and the effects of long continued travel. To this last cause must be attributed the prevalence of running sores in the legs and feet, which were much aggravated by the bites of the venomous flies so common in the hills. No medical attendance was available and many who had no friends to nurse and attend them during illness perished by the way. Mr. Batten made some attempts to succour the pilgrims by distributing medicines through the vaccinators. In a letter of his written in 1840 he showed that there were no funds available for supplying medical attendance, as the surplus revenue from the Badrináth road fund was only sufficient for the purpose to which it was applied, and

¹ To Government, dated 24th January, 1842; to Government, dated 1st March, 1842.

² To Medical Board, dated 9th January, 1840; from Huddleston to Commissioner, dated 10th March, 1840; from Government, dated 8th April, 1840; from Government, dated 29th April, 1840.

Government in consequence sanctioned the establishment of one native doctor.

The Khola charities were administered as under the Native Government by a Superintendent up to
Khola charity.

1830 and the distribution was made at Srinagar. In that year the Hardwár road being completed to Deoprayág, it was thought advisable to remove the distribution to Sítakoti, a place between Srinagar and Deoprayág. A house for the Superintendent and for storing the grain was there built. As there were two charities still distributed at Srinagar, the Khola *saddbart* was quite superfluous there. An investigation into the receipts and disbursements led to a discovery of several abuses. A new assessment was in consequence made on a view of the actual assets; this settlement after a partial modification was finally concluded with the consent of landholders at the following rates:—wheat 326 *dáns*, rice 42, manduwa 42 and cash Rs. 85 *kachcha*. Taking the *dán* at 32 seers, the total money value of the grain and cash was about Rs. 300. The pilgrims were entitled to receive going and returning 1½ lb of flour, a pice each of *ghí* and salt and half a pound of *dál* or split pulse.¹ This arrangement was abolished in 1851 and the proceeds were handed over to the Srinagar hospital.

The Kedárnáth endowments in 1830
Kedárnáth charity. yielded a revenue of Rs. 2,843 as follows:—

Patti Mahryuri,	Rs. 1,842,	distributed at	Nála Patan.
" Parkandi	" 753	"	Chobta.
" Bámsu	" 518	"	Patagarh.
" Malkhanda	" 230	"	Chobta.

Mr. Traill left the management of the revenues of these charities entirely in the hands of the Ráwal, who seems to have been a man of sense and resource anxious to gain a name and unrestricted by a greedy set of followers. He devoted the surplus funds to rebuilding the temples at Kedárnáth, Trijogi, Ukhimath and Madhmaheswar.² This may be due to the fact that the constitution of the priesthood at Kedárnáth resembles more that of a monastery of which the Ráwal is merely the head and several

¹ Rs. 10,000 were invested in Government securities for the purpose of feeding the pilgrims to Badrináth; to Government, dated 24th January, 1833

² Batten in 1840 writes that the Ráwal is not obliged to send in any stated or periodical lists of his (1) *saddbart*, (2) *gúth*, (3) *offerings*.

of the members possess nearly the same power, while at Badrináth the Brahmans are absolute and their head without control. Under the orders of Government the management of these charities was transferred to the local agency in 1851.

Regarding Mr. Traill's proceedings Mr. (now Sir John) Strachey, in his report in 1851 on these funds, shows that they were not opposed to the orders of Government and that "his (Mr. Traill's) management of the charities was not only in accordance with the spirit of the endowments wisely and liberally interpreted, but it conferred on the district a benefit the importance of which it is difficult to estimate too highly. I do not overstate my opinion when I say that Garhwál has derived more advantage from the construction by Mr. Traill and his successors of these roads than from all the other measures put together that have been taken for the improvement of the country since the introduction of the British Government to the present time. I may add that the manner in which Mr. Traill expended the surplus *saddart* funds has contributed perhaps more than anything else that he did to preserve the feelings of admiration and respect with which his name is remembered in these hills." In his report¹ to Government the same officer proposed that the funds should be again taken under Government superintendence, and that the surplus be devoted to the useful works contemplated by the spirit of the grants. Government on this issued orders to the local officers to assume charge of all these charitable grants to be managed as a trust in the spirit of the Local Agency Act (Regulation XIX. of 1810). The net proceeds of the lands to be disbursed by the same officers for the benefit of pilgrims proceeding to the shrines in Garhwál: first for feeding indigent pilgrims; secondly, the establishment of an hospital at Srínagar and gradually of dispensaries along the line of march; thirdly, the repair of the roads leading to the shrines most visited.²

¹ No. 14, dated 13th May, 1850; replied to by G. O. No. 3167 of 6th October, 1850.

² The rules introduced in 1853 were modified by G. O. No. 1069 A., dated 25th September, 1862, on account of the disgraceful management of the temple at Badrináth. It was then decreed that the ancient custom should be revived by which the Rája of Tibri selected and appointed the chief officials of the temple. "This will tend more than anything else to sever the connection of the European officers with the temple, to impose a real responsibility on the Ráwal and the Lekhwar and put a stop to the wholesale predation now practised. The abolition of the office of Wazir is also authorised." The local committee, however, administered the *saddart* funds as before.

Since then, the revenues have been devoted to these purposes and dispensaries have been erected at suitable spots on the pilgrim road, the lowest being at Srinagar, and are so situated that a pilgrim is never more than two marches from a dispensary from the time he leaves Srinagar till he again descends to the plains. Rest-houses have also been constructed at every ten or twelve miles along the entire route. These valuable institutions have saved a great many lives. Before their erection sick pilgrims were left by their friends, whose means did not permit of their halting, to die. A great many of them got swollen legs from the bite of a small fly; now they are treated and fed at the dispensaries, and on recovery many, instead of going on to Badrináth, return at once to the plains. Before these branch dispensaries were instituted, these unhappy creatures, unable to move from swollen legs, were left to die of starvation. The land revenue of the current settlement on the *sadábart* villages amounted to Rs. 10,013. In Garhwál there are villages in Bárabáyún assessed at Rs. 420 and in Dewalgarh at Rs. 189: then parganah Dasoli assessed at Rs. 2,155 and pattis Bámsu, Parkandi and Maikhandā assessed at Rs. 1,449; total Rs. 4,213. In Kumaon the Kotauli and Mahryúri pattis give an aggregate revenue of Rs. 5,800.

Tea cultivation is the only industry in Garhwál under European superintendence. Some account of the origin and history¹ of tea-planting has been given elsewhere, and under KUMAON will be found the only statistics of outturn that we possess. The following table gives a list of the tea-plantations in existence at the current settlement with some statistics as to tenure and area:—‘A.’ signifies those held free of revenue under the grant rules: ‘B.’ those held free of revenue under the “waste-land and fee-simple rules:” ‘C.’ was sold by auction, and ‘D.’ comprises the old Government tea-gardens sold in fee-simple and including Chapra, Marwára, Chalangaon, Pokhri and Ráwatgaon-Dúlla.

¹ GEN. X., 557.

On village tenure.

Patti.	Village.	Holder.	Area in bi-ls		Land revenue.
			B.	a	Rs.
Pindarwár (Badhán).	Chiringa ...	Talwári Tea Co	34	8	32
Ditto ...	Chiringa gásth,	Ditto ...	19	13	20
Lobba (Chándpur).	Ghandyál ...	Silkot Tea Co,	73	11	37
Ditto ...	Silkot ...	Ditto ...	39	0	25
Ditto ...	Chhapáli ...	Ditto ..	36	13	24
Ditto ...	Kuriya ...	Ditto ...	23	11	13
Ditto ...	Rohira ...	Ditto ...	77	10	35
Ditto ...	Rithiya ...	J. A. S. Richards	24	14	22
Sili (Chándpur).	Samán ...	Major M. yne...	7	13	10
Choprakot (Chándpur).	Museti ...	J. Henry	62	15	35
Ditto ...	Rámikesaln ...	Ditto ...	8	12	5
Dharmdyálsyún (Malla, Saluu).	Chopta ...	Ditto ...	118	11	62
		Total ...	528	3	340

Revenue-free.

Patti.	Grant.	Grantee.	Area in acres.		Purchase-money.
			A.	r. p.	Rs.
Pindarwár (Badhán)	Gwáldam ...	Tulwari Tea Co.,	594	0 26	1,530A
Ditto ...	Talwári ...	Ditto ...	290	1 20	731A
Ditto ...	Kauriya ...	Ditto ...	720	3 24	1,802B
Ditto ...	Sartoli ...	Ditto ...	1,288	0 20	3,220B
Ditto ...	Binatoli ...	C R. Troup ...	517	3 0	1,294B
Lobba ...	Matkota-khál,	Silkot Tea Co.,	536	0 32	1,371A
Ditto ...	Satoli ...	J. A. S. Richards,	175	2 7	449A
Ditto ...	Diwáli ...	Ditto ...	705	3 18	1,778A
Ditto ...	Korakhet ...	Major R. Mayne,	1,914	1 4	3,059A
Sili ...	Benital ...	Capt. E. Gawne,	1,649	3 0	3,903A
Choprakot	Barsár ...	J. Henry ...	504	2 32	1,262B
Kandársyún	Andrupa ...	Major R. Mayne,	792	0 16	1,980C
Ditto ...	Gadoli ...	J. Henry ...	1,001	3 24	1,00,000D
		Total ...	9,891	6 24	1,32,379

The *daftaris* or *kánungos* were leading members of the local administration under the *Rájas* of Garhwál. *Rámanand* and *Dharni* filled the office previous to the *Gorkháli* conquest, but were

Kánungos. convicted of a traitorous correspondence

with the enemy and were executed by the *Rája*. During the *Gorkháli* occupation the office of *kánungo* was conferred on *Gujúddhar* and *Kishan Datt*, the sons, and *Kishnanand* and *Harakpati*, the brothers, of *Ráma* and *Dharni*, and a grant of lands assessed at *Rs.* 1,500 *Gk.* a year was made for their support. On the British occupation, the grant was resumed in accordance with our practice of remunerating the servants of Government by money payments and a regular salary of *Rs.* 31 a month was allowed instead. The *kánungos* of Garhwál are still four in number and are of the *Khanduri* caste. In 1829, the *kánungos* were invested¹ with power to try personal civil suits up to *Rs.* 25, but in 1837 separate *munsifs* were appointed² and the question of the re-organisation of the entire civil administration coming forward, this power was taken away from them and they were restricted to their present duties. The need of *patwáris* had been shown in the earlier settlements, and finding a surplus on the resettlement of the lands resumed from the *kánungos*, Mr. Traill devoted it to the payment of *patwáris*, who were subsequently appointed to every *pargaush* in the district and are found to be an efficient and useful body of public servants.³

The origin of the office of *sayána* and *padhán* is sufficiently noticed under the article KUMAON. Here, as in Kumaon, the land is cultivated by the proprietors. As stated by Mr. Batten, about three-fifths of the villages in Garhwál are occupied by proprietors who cultivate the land in severalty under a joint responsibility for the land revenue and pay nothing except their shares of the demand and the customary fees of the elected village *padhán*, who again pays only the ministerial fee due to the *thokdár*. The remaining two-fifths are inhabited by those who, in addition to the above-named items, pay certain portions of *ghi*, grain and other produce and a higher rate

¹ To Government, dated 2nd April, 1816; from Government, dated 4th May 1816; from Board, dated 14th August, 1818.

² From Government, dated 16th March, 1839; Board's Records, No. 29, dated 27th October, 1818; Board's Records, No. 7, dated 23rd March, 1819; Board's Records, No. 16, dated 3rd September, 1819.

³ From Government, No. 79, dated 16th July, 1837.

of customary dues to the *thokddr* in his capacity of sharer or to the other sharers in the village. Speaking generally, all are well to do. They can all make enough from their land to pay the rent and keep themselves and their families in food and clothing and even to put by money. The proof of their being well off is that it is a most difficult matter to procure free labour, the fact being that the people do not require to work at any extra occupation to support themselves. Tenants with permanent rights (*khdyakars*) have their lands on terms little inferior to those of a proprietor and frequently they are far better off than the proprietor himself. Indeed, the worst off of this last class are those who have most of their land held by permanent tenants who only pay them a small proprietary due (*malikdna*). Tenants at-will are chiefly small proprietors and permanent tenants who have not sufficient land for their own wants, or the menials of the village. Of late years everything has, in spite of indifferent seasons, been in favour of the cultivating community. The price of grain has risen greatly, many marts for the sale of agricultural produce have arisen and the assessment of the land is very light and fixed for a term of years.

Colonel Fisher writes in 1883:—

"The relations between landlords and tenants continue satisfactory and generally friendly. The chief strain between them is caused by the pressure of population on the soil; this pressure induces proprietors, where the possession is largely in the hands of tenants with occupaney rights, to claim a right of ownership in all land not assessed, and the tenants are equally resolute in contesting the claim or evading it by declaring the waste plots necessary for pasturage. The same pressure is at work in pushing cultivation into the waste-lands adjoining rival villages. The contests caused by these extensions are called "boundary disputes," but, in practice, the officer deciding them has to draw a line which will provide a sufficient margin for extension of cultivation in proportion to the population of each village, and yet leave some pasturage and fuel for the agricultural wants of the people. Suits for enhancement or abatement of rents are unknown, and I trust they may long continue so, instead of sowing discord, as they assuredly would amongst the cultivating classes. Imperfect partitions have to be carefully watched to prevent the growth of ill-feeling amongst co-proprietors."

A cultivator having six to eight acres of land is considered to have a large holding; an average one is two to four acres, whilst there are some as small as from one quarter to half an acre. The prevailing custom of dividing all immoveable property equally amongst the sons, together with the tenacity with which all hill

men cling to their hereditary landed property, has had, and still must have, the effect of diminishing the size and multiplying the number of the¹ holdings. But there is no doubt that these influences have also caused large increase in the cultivated area, and as there is still plenty of waste-land, they are not likely to have any prejudicial effect on the people for a long time to come. A single plough in this district is supposed to cultivate three acres of land. The implements and cattle in aid are worth about sixty rupees. A holding of five acres in extent would require two ploughs, and after deducting all expenses it ought in an average season to bring in eighty rupees as profits or something like seven-rupees a month. The peasantry are not as a rule in debt; when they are so it has generally been incurred in purchasing wives for themselves and their sons, or in purchasing or redeeming some hereditary land to prevent an outsider getting it. There is no such thing as a landless unskilled labourer in the district. Every man who has no land follows some trade or combines his craft with cultivation as tenant-at-will. Women and children are largely employed in field labour, but they work for their own families and not for wages. The women do all the field work except ploughing and sowing and the children weed, reap and tend the cattle.

Prices in Garhwál per rupee in cers of 80 tolas (2·057 lb. avd.) 'S' stands for Srinagar and 'K' for Kotdwára.

Article.	Native name.	1840.		1850.		1860.		1865.		1868.		1869.	
		S.	K.	S.	K.	S.	K.	S.	K.	S.	K.	S.	K.
Rice, 1st ...	<i>Basmati</i> ...	20	16	11½	14½	11½	12	7½	9½	7½	7½	8½	7½
" 2nd ...	<i>Bakwa</i> ...	60	36	12½	20	21½	19½	11½	12½	12½	1½	14½	9½
" 3rd ...	<i>Rasiya</i> ...	58	24	25	22	23	21	12½	13	13½	14½	15	10
Wheat, white,	<i>Daudhání,</i>	68	24	23	23	38	30½	13	18	20	17½	21	12
" red ...	<i>Lalgehun</i> ...	60	28	24½	24	36½	20	12½	18½	21½	18	22	12½
Barley ...	<i>Jau</i> ...	70	30	80	26	36	22	27½	24½	18½	25½	26½	18½
Millet ...	<i>Mandwa,</i>	70	50	48	40	40	38	21	24	19½	23½	22½	18
Buckwheat...	<i>Opal</i> ...	17½	40	20½	24	34½	22	12½	18½	11½	16½	15½	12½
Rape ...	<i>Lahl</i> ...	40	42	30	27	26	28	18	22	18	24	14	17
Pulse ...	<i>Urd</i> ...	33½	49	28	26	23½	30	12½	16½	11½	17½	13½	16½
Onions ...	<i>Pyaj</i> ...	60	...	70	...	68	...	58	...	50	...	48	...
Potatoes ...	<i>Alu</i> ...	60	41	50	34	45	33	23	26	26	18	24	14

(The prices in 1868 to 1870 are those of famine seasons).

At the late settlement cultivated land was classed as irrigated, dry first quality, dry second quality. In fixing the rate on these the first quality dry was assessed one-third higher and the irrigated twice as much as the second quality dry.

¹ For the purposes of the Income-tax Act of 1870 there were only 75 incomes in Garhwál above Rs. 500 a year, and the total tax was Rs. 1,939. The population is essentially agricultural and there is little trade and few usurers, the people being well enough off to be able to do without these luxuries.

The average rate per *bisi* on the whole district was eleven annas. Irrigated land is generally cultivated with the better kind of rice, wheat and tobacco, and though it generally produces good crops and they can rarely fail owing to the unfailing water-supply, still it has to be left fallow oftener than other kinds of soil. Unirrigated first quality is the most useful soil; it produces everything but tobacco and the better kinds of rice; and its productive powers are often not inferior to that of irrigated land, while it has to be left fallow, but every fourth season, still the crops are always liable to damage by drought, and where manure is not freely given, the soil becomes poor and unproductive. Unirrigated second quality consists of the small fields (*khets*) on the edges of the better land, or where the hill side is very steep or stony, it is generally sown with barley and the several millets and buckwheat. If manured a little or after the land has been left fallow, it gives a fair return in a favourable season; but in a bad season it hardly repays the labor expended on it.

There is one other kind of cultivation called *khal* or *kanala*, meaning temporary cultivation; for this the people cut down a strip of jungle on the hill-side, burn the felled timber on it,

Temporary cultivation. have one or two crops off it, and then leave it waste for ten years. They usually sow the hardier kinds of grain, such as buckwheat, amaranthus, and *mandua* on such land; but in parts, near the plains, *til* is also sown and yields largely; this land is of course unassessed. Rents are generally paid in money; prior to the

Rents. current settlement, a large proportion, notably those assessed on temple lands, were paid in kind, but almost all have been commuted for cash. The only tenants who commonly pay in kind are tenants-at-will. The *rabi* varies from one-third to one-fourth of the crops realised, but it is usually the latter. Manuring is largely practised; the people procure manure from their own cattle-sheds and by bringing leaves from the jungles; it cannot be purchased and costs them nothing beyond the labour. Irrigation is practised in all the low valleys and where water is easily procured. The only labour is the making of the water channel, and this is given by the whole village community: so that irrigation really costs very little. In the Bhábar khém estate, where Government has paid for making the small canals, the water-rate is two annas per *kuchcha* bigha or twelve annas per acre. Lands are usually left fallow after three crops have been taken off them, but only for one season. This even is not always done, as, after a bad season the people cultivate all they can for the following crops. The

Rotation of crops. rotation of crops is as follows; first rice, then wheat, and lastly *mandua*; after which the land is left fallow till the next rice crop. This system is seldom varied except by substituting barley for wheat, and some other millet or a pulse for *mandua*. The lands of a village are always divided into two *sarbs*, one called the wheat *sarb*, the other the rice *sarb*, and these are changed every second year.

Though there is an immense amount of waste-land in Garhwál, it may be held that almost all tracts having an elevation exceeding 8,000 feet above the level of the sea are useless except for pasture, while a great portion of their area is too precipitous even for grazing. There are very few villages so high as 8,000 feet, while for tea-planting, it is considered that, though the flavour of the tea may be finer, plants grown above 6,500

Waste-lands.

feet do not give produce sufficient to yield a remunerating profit. Many planters have purchased land at a greater elevation, but they have come to the conclusion that it is a waste of money. For tea plantations, too, intending settlers have other points to look to in taking up lands. Land destined for a tea garden should have easy and near communication to the plains; should be near a populous district, should have a favourable aspect and a good water-supply and timber for fuel and boxes and grazing land should be available in the vicinity, as the cost of carriage of timber alone would amount to a considerable sum. There are not many plots of waste land which supply all these requirements, while some that have them are for reasons to be hereafter noted unattainable.

There are numerous places, however, which would suit a sheep or cattle-breeder, whose only difficulty would be wild animals, while waste for grazing this is one that might be easily overcome. There are stretches of jungle which would afford pasturage to thousands of sheep, where water is abundant, and the climate cool and healthy, and now that European troops are stationed in these hills, sheep-breeding ought to prove remunerative. Some of the waste-lands are being taken up for villages, but as hill men are averse to settling far from their fellows, and only extend cultivation by small degrees as their numbers increase, it must be many years before the area of useful waste shows visible signs of decrease. Under the village tenure which we found obtaining when we took possession of the hills, each village had a certain defined boundary, extending in many instances for miles and miles into dense jungles and to the tops of ridges. These boundaries have never been altered by us, and though Government is the absolute lord of the soil and has reserved to it certain rights beyond the cultivated and measured area, there is some difficulty in dealing with land, though waste within a village boundary. For the people adhere tenaciously to these old boundaries, and look upon any attempt to abridge them as an interference with their rights, and no any one who steps in as an enemy and interloper. This feeling has caused much annoyance to and disputes with the planters, who cannot understand the community of grazing rights existing among the people around them, as all grazing lands, except when measured, are common. This question has not up to the present given much trouble, but as cattle increase, it will be a source of dispute, and will have to be provided for. During the hot weather many of the pasture lands, further removed from all habitation, are used for feeding herds of buffaloes and cattle which are driven up there, and housed in rough huts made of branches thinly roofed with grass. These places are called *karaks*, and the same spot will be used year after year by the same herd. A few men attend on each herd, and they collect the milk and turn it into ghi or clarified butter for future sale. It has never been thought worth while to levy any grazing fees indeed, the expense of levying would almost equal the receipts, while it would be also interfering with an old-established right. Still there is ample room for persons who would wish to rent farms for sheep or cattle-breeding. The most extensive waste-lands lie on either side of the Dádu-ke-toh range the Badhangarh range, and in patti Chhaprakot, Chauthan Irnakot and also in the Dhanpur range. In all these places there are large tracts of waste land, though not many fit for tea plantations owing to their distance from the plains. Mr Beckett in his Gahwál settlement report (1865) gives a list of sites available for tea plantations.

As my work in this memoir is intended to be of practical use to the administrators of Kumaon and Garhwál I must quote still further from those documents which are of importance on the very burning question of the waste-lands in the hills. I have given as far as possible in the words of the writers a tolerably complete account of the rights in land and to land and have shown that Government is the owner of all but the area assessed to revenue. I now append Sir Henry Ramsay's remarks on the whole subject, and his thirty years' experience is worthy of attention. He writes:—

"The settlement report and statements now under submission (Mr. Beckett's settlement in 1864) prove satisfactorily, in my opinion, that Mr. Batten acted wisely in not interfering with the old village boundaries, which had been recognised by Mr. Trill and carefully recorded, seeing that the existence of those boundaries; previous to the 20 years' settlement, had not been found incompatible with an immense increase of cultivation and with a doubling of the land revenue; and it being now acknowledged that, during the period of the 20 years' settlement, the agricultural prosperity of the country has immensely increased, enabling also the succeeding settlement officer to improve the Government fisc in a noticeable degree. The question arises—Did the fact of the attention of Government having been drawn to its own rights in the waste-lands, by the application of European speculators for lands on which to grow the great staple product, tea, necessitate or render advisable the actual demarcation of separate village boundaries, within which no new settlement could be made for the benefit of the State or the public at the revision now under report? I decidedly think not. If the tea planting question had never been raised, it is obvious from the past fiscal history of the province, and from all which has hitherto been placed on record, that the tendency of actual demarcated limitation to the extension of tillage and clearing, would be to retard such agricultural progress among the present occupants of the soil. But the plantation question having been raised, has such a new element of value and importance been introduced into the country as to overbalance all the advantages of non-interference,—that is, of leaving the rights of the State and the people commingled and undivided throughout the greater part of the mountain tracts? Or does its introduction compel the enforced separation of those rights everywhere and in all localities? I think certainly not. The real difference between the old *naúbad* lease and the fee-simple grant of recent years is that the former created a new *mahal*, productive of future revenue to the State, and of proprietary right and profit to the clearer of the waste, but left the use of the adjacent forest in the same state as before; while the latter necessitates a far more careful preliminary examination than was previously required of all the existing circumstances of the neighbourhood; and when that investigation has been completed and has resulted in favour of Government, as represented by the applicant, places the latter in full and exclusive possession of a demarcated tract. The existence of this difference, I conceive, does not justify a revolution in the whole agricultural status of the province. On the contrary, I feel confident that, in accordance with the clearly and strongly expressed orders of the Secretary of State in his despatch of 1862, and of the Governor-General's Rules of 1861, the new state of things renders it more than ever incumbent on the local officers to take care that colonisation does not

turn into confiscation. The best way to secure this result is for the district officer, if the site applied for was not set aside by the settlement officer, to settle each case on its own merits—never without personal examination of the site applied for—leaving it to the appellate authority (if referred to) to decide whether, in any case, a village or a neighbourhood has been too hastily declared to have claimed any tract beyond its real requirements for extension, pasture or forest use; or whether a wise discretion has been used in giving a field for his industry to the introducer of foreign capital, the creator of valuable staples, and the employer of remunerated labour.

In all the discussions which have hitherto taken place one fact has, I think, been too much lost sight of, viz., that the demarcation of a reasonable and appropriate boundary for a village holding a nominal right to what may be considered an unreasonable and improper extent of waste-land does not dispose of the whole question of forest use. Many mountain tracts included within the nominal boundaries of particular villages are used by a whole neighbourhood of villages for the purposes of pasture, collecting of leaves, &c. This is more particularly the case in Central Kumaon (Pali and Barshmandal) and in lower Garhwál, including the important parganahs of Barahayun and Chaundkot. I hope I have said enough to prove that Mr. Beckett acted with judgment in following that part of his predecessor's policy which left Mr. Traill's recorded boundaries undisturbed, and which abstained from useless and perhaps mischievous demarcation, which would have involved an enormous expenditure of money, time, and trouble.¹ At the same time it is clear that care has been taken by the settlement officer to ascertain and record, for the benefit of Government and the public, all known sites of waste villages in the district, and all sites which, in his opinion, were suitable and available for tea-planting.

It is highly probable that disappointment may be felt at the promulgation of the fact that large tracts of country with good soil, in the vicinity of markets, and with facilities of cheap labour, are not available for English settlers; and that, as I have heard it expressed, the latter can only get the "leavings of the Pahrís." But in reality such disappointment can only be felt by those who have used their imagination rather than their reason, or who have omitted to consult the most ordinary sources of information. The central and lower Himalayan parganahs are not howling wildernesses, but have been for ages occupied by an industrious agricultural population. This people are in possession of those tracts which are easiest of access and which yield the least difficult and most profitable returns to industry. The country so occupied is therefore not available for foreign colonization; even if its climate were suitable, which it is not. The tracts of country lying between these richer slopes and valleys, and the unillable waste of the more inaccessible heights, are those into which the old occupants have hitherto been gradually extending their possessions: and it is a new thing for them to be told that such extension is an usurpation of State rights, and that they ought to give place to the dominant stranger, merely because, to the latter, the climate and situation are suitable and pleasant. The surprise of the inhabitants, at the expectations of foreign settlers, is certainly quite as strong as the disappointment of the latter at not finding the best part

¹ As this duty could only be performed by the settlement officer himself, and would alone have occupied his time for many years.

of the country at their disposal. Under proper management, however, i. e., under a proper carrying out of the waste-land rules in those portions of the province where the risk of interference with an occupant population does not intervene as an obstacle, and where the comparative sparseness of the population has still left many good sites available for settlers, the introduction of capital and the demand for labour will go hand in hand; and while the settler will benefit by the free and unencumbered field for his money and industry, the peasant proprietor of a few terraces in the fully cultivated and overcrowded villages of the old occupied tracts will be too glad to procure at some distant but not quite foreign plantation a cash return for his labour, less burdensomely acquired, and more certain than his hire as a coolie at Nynee Tal or Mussoorie. Already more than one thousand Pahiris are drawing monthly wages in Kátyár in Kumaon, the very patti described by Mr. Batten in 1846 as waste, and therefore as the most available for the experiment of tea-growing. I hope that his similar expectation for Gaugoll and Sira in Kumaon, and such comparatively waste tracts, may be realized in due time; but before tea-planting can be placed on a secure and sound footing, the dream of obtaining from government, on fee-simple terms, profitable estates in the heart of the occupied country must be abandoned.

Mr. Beckett rightly designates the general character of his own settlement as *ryotwari*, in accordance with the actual status of affairs. In Garhwál revenue and rent are almost convertible terms, and the great mass of the cultivators may be considered as proprietors of the plots of ground which they cultivate, liable only for the payment of their quota of the government demand, plus the fee which they contribute to their padhán for the trouble and risk of collection. Where superior rights, carrying with them the realization of rent, or, in its place, dues representing rent as formerly existing, these, under the revised arrangements which have been gradually anticipated during the period of the 20 years' settlement, have been substituted by a *malikdāna* never exceeding 20 per cent. on the government demand as a fixed and certain amount collected under authority; and thus a vast amount of intestine disputes and vexatious litigation has been got rid of. I will not say that all the proprietor landlords are content with the new arrangement, but there has been no noticeable opposition to a change which the advance of events and the increasing intelligence and means of the cultivating classes must sooner or later have brought about. Even to the plaintiff, *sayānas* or sharers' suits for the realization of miscellaneous dues, such as are detailed in Mr. Batten's reports were becoming highly inconvenient and irksome; and it has for some time been felt by both payers and receivers that a time was coming when a fixed rate of cash percentage must be substituted for legs and breasts of goats, fees of three-anna pieces (*limushas*), and other offerings. In the case of the *shokdars* Mr. Beckett took the greatest pains to carry out the spirit of the government orders of 1856, and to ascertain and decide from the examination of reliable records, who amongst the holders of *shokdārī* leases were parties really entitled, by prescriptive right, to be considered proprietary superiors, who were only the creation of Mr. Traill's later years, or of his successors, brought into existence by the supposed necessities of village police duties, now no longer required at their hands. In regard to the inferior or nominally inferior tenants of the soil, the *khayatar* of the hills stands out as the repre-

representative of the *kadimi kashthar* of the plains, with this essential difference, that in no instance does he own his position to any legislative enactment like the Rent Act of the plains, and that, to the best of my belief, he has not been created by the spontaneous proceedings of the local authorities. If any one will take the trouble to consult the data recorded by Mr. Traill a very few years after the introduction of British rule, they will find that the right of cultivating occupancy remained with the descendants of former grantees (*thatwans*), even where the *thāt* or grant of proprietary right had been conferred by the sovereign power on new superiors; and that, in all cases, whether of such descendants or of ordinary cultivators continuing from father to son in the undisturbed use of their ploughs, the contracted state of the labouring population, as compared with the extent of arable land, has always been sure to secure the most favourable terms to the occupant tenants of the soil. Practically, therefore, the latter, if found to be rightfully claimants of the title *khashtakar*, whether as *ex-thatwans* or as uninterfered with and necessary cultivators, are kept in possession so long as they pay their quotas of the government revenue, plus a small amount of *mahidāna*, including *malguzari* fees, though they so far differ from their *thatwan* co-villagers, inasmuch as they cannot alienate this holding. *Pahikashī* cultivators for the most part cultivate in villages adjacent to their homes on the most favourable terms, and indeed they may almost be considered as proprietary occupants of the soil which they cultivate, except that they cannot claim it as belonging to their own village, and of course cannot alienate it. In Garhwál, the *urthan* tenant corresponds with the tenant-at-will of the plains, and, as a general rule, holds, by an annual written agreement. The *urthan* of one share-holder in a village is often found to be a co-sharer himself, who has spare time to devote to work beyond his own (perhaps too few) fields, and the whole arrangement of proprietary and non-proprietary holding is thoroughly understood by the people themselves. Moreover, the settlement officer has not recorded such temporary holdings in the record of revenue and rent liabilities. Under these circumstances, suits similar to those triable under the Rent Acts in the plains are not likely to arise in Garhwál; and if they do occur, can be disposed of in the easiest manner as matters of simple contract between man and man; while a reference to the village record (a copy of which, so far as it affects himself, is eagerly taken and zealously preserved by every villager) at once enables the revenue officer to dispose of every case.

The following statement prepared by Colonel Garstin summarizes the status of the land-holders at four different periods: showing the number of estates on the revenue-roll, the land-revenue, the number of registered proprietors paying revenue direct to government and the average revenue paid by each:—

	1815-16	1850-51.	1860-61.	1870-71.
Number of estates ...	3,451	4,103	4,109	4,417
Number of registered sharers...	20,784	26,934	27,853	30,856
Land-revenue paid (exclusive of lands not on the revenue-roll)	Rs. a. p. 35,990 0 0	Rs. a. p. 68,644 0 0	Rs. a. p. 66,180 0 0	Rs. a. p. 93,584 0 0
Average land-revenue paid by each estate ...	10 5 10	16 11 8	16 9 5	21 10 2
Average by each registered sharer or proprietor ...	1 11 8	2 8 9	2 7 2	3 1 6

On taking over Garhwál, the excise on spirits existed only in Srinagar and brought in a revenue of only Rs. 91 a year in 1814, and that on soap, tobacco and *charas* gave a revenue of Rs. 365 *Gorkháll* or Rs. 274 *Parukhabad*. In 1821 the receipts from spirit farms amounted to only Rs. 91 and in 1823 to Rs. 114. The statistics for the earlier years may be shown thus:—

Spirits.		Drugs.	Spirits.		Drugs.	Spirits.		Drugs.			
Rs.		Rs.	Rs.		Rs.	Rs.		Rs.			
1824-25	...	137	68 ¹	1827-28	...	370	68	1830-31	...	730	68
1825-26	...	342	68	1828-29	...	325	68	1832-33	...	732	68
1826-27	...	319	68	1829-30	...	774	57	1833 34	...	804	52

In 1881 the gross receipts amounted to Rs. 1,886 and in 1882 to Rs. 1,767 on account of spirits and drugs. The farming system is in force and in 1882 the license to manufacture and sell country spirits brought in Rs. 1,215; the license to sell drugs yielded Rs. 450, and opium Rs. 100. The absence of cantonments renders the increase in this district very much less than in Kumaun. As a rule the people of the hills do not indulge in intoxicating liquors, and it should be in the future as it has been in the past the object of the administration to limit the number of shops for the sale of liquor. Their extension can only induce the people to take to the practice and must for every reason be deprecated. The Bhotiyas make their own spirits, but neither sell it nor induce other people to drink, and they may be left alone as they are practically beyond the operations of the excise.

In 1815 the revenue amounted to Rs. 35,990, and the civil expenditure to Rs. 10,130. In 1850-51 the receipts were Rs. 79,954 and the expenditure amounted to Rs. 22,849. The receipts from imperial sources such as land revenue, excise, stamps, law and justice, &c., amounted to Rs. 82,229 in 1860-61 and Rs. 1,13,673 in 1870-71 and the expenditure to Rs. 27,626 and Rs. 36,888 respectively. The receipts from local funds amounted to Rs. 8,539 in 1860-61 and to Rs. 19,947 in 1870-71 and the expenditure to Rs. 8,080 and Rs. 19,818 respectively.

Garhwál Bhábar. a narrow strip of land seldom more than three miles in breadth, lying between the foot of the hills and the Rám-

nagar and Hardwár road which here forms the boundary between Garhwál and Bijnor and which in places comes up to the hills. The whole Bhábar is included within the forest boundary, but two patches at Kohdwára and on the banks of the Málin stream have been reclaimed and are under direct management (*khdn tahsil*). Another block towards the Ganges has been added and the cultivation much extended. The whole is irrigated and pays the cultivator well, but the climate is still malarious to a degree. The present income is a fluctuating one, but when all the land fit for irrigation and cultivation is taken up it should yield a considerable revenue. The forest trees are of the commoner kind except *sissu*. The *sál* does not flourish out in the plains, but does best in the *dúns* or valleys within the outer range. The highest revenue is derived from bambus, which are of a superior quality: next comes *bábar* grass (*Eriophorum comosum*) for rope-making. The Garhwál Bhábar, as well as the portion of it in the Bijnor district, is not near so unhealthy as that of Kumaon. The forest is not so dense, and there is very little water and marshy land. In addition there is no Taráí to speak of. Cultivation, too, is rapidly pushing up from the plains towards the hills, and in a few years, with the exception of the part preserved by the Forest Department and the tract above Chandi reserved for the Rurki Workshops, there will be no Bhábar left.

Gár-toh or Gár-tod (upper 'Gár'), also called Gár-yársa or the summer abode ('*yár*,' 'heat' or 'summer'), to distinguish it from Gár-gunsa, the winter abode ('*gun*' 'cold' or 'winter'), situate two or three days' journey down the river further to the north-west, is situate on the left bank of the southern branch of the Indus in north latitude 31°-44'-4" and east longitude 80°-23'-33", at an elevation of 14,250 feet above the level of the sea. It is the headquarters of the two Gárpuns who govern Nári Khorsum. There are three divisions in Tibet: Eastern Tibet or Kham-yul, the people of which are Kham-pas; middle Tibet or Bod-yul, comprising the provinces of U and Tsang (hence U-tsang) called Bod-pas or Pot-pas, and western Tibet or Nári (*mNáris*), the people of which are known as Nári-pas and which is further divided into Mang-yul, Nári-Khorsum and Már-yul. To the north is the Hor or Sok country, the people being known as Hor-pas or Brok-pas, or Dok pas, the car-

riers from the salt and borax mines to the marts of Nári. In Nári there were several small principalities, such as Guge, Puráng and Kangri, but these are now subject to the two Gárpuns of upper and lower Gár. These act jointly together and form a board for the administration of civil affairs called '*Lankya*.' The senior is styled *Urku-gung*, abbreviated usually to *U-gung* and the junior is called *Urku-wa*, written *U-wuh*; the *Urgu-ma* and *Urgu-ya* of Mr. Traill. They have each a *Sarishtadár* or *Zungnirh*, and these two, as registrars, sometimes sit as a court in petty cases. Besides these, there are *duniks* or writers and *nirbas* or agents. Under the Gárpuns are Zungpuns or governors of districts and Makhpuns or headmen of circles or groups of villages. In Nári there are four Zungpuns: — (1) at Ruduk in charge of Ládak; (2) at Tsáparang in Guge in charge of Bisálir, Nilang and Mána; (3) at Daba in Guge in charge of Níti and Juhár; and (4) in Puráng in charge of the Dárma and Byáns frontiers and Humla in Nepál. Both Gárpuns and Zungpuns come from Lhása and have a tenure of office for three years, after which they are relieved and return to give an account of their stewardship. Besides these officers, there is a commissioner of revenue in charge of the tea monopoly called *Lung-chung-pun*,¹ whose duty it is to assess the amount of tea to be taken by each district at a fixed price and a contractor for the gold mines called *Sár-pun* who manages those mines. The salt and borax mines are managed by the Gárpuns. A further sub-division is into thirteen Punkágs, each under its local chief called *Pun*; those of the Puráng valley being styled Makhpuns. Gár-yársa is only occupied during the summer, when the whole population live in tents, numbering some 200 belonging to traders. In Gár-gunsa there are three large and eight small houses, the people here, too, for the most part living in tents. The Tibetans call India generally *Monyul* and the people *Mon*, a male *Mon-pa* and a female *Mon-mo*: *Kyunam* is *Kumaon*, *Galdiya* is *Garhwál*, and *Chongsa* the *Nilang* valley.

Gaulá, Gola, or Gárigi, a stream which takes its rise on the southern slopes of the ridge to the south of Dol in Dolphát and extreme north of patti Chaubhainsi, in north latitude 29°-27'-30" and east longitude 79°-46'-40". It has a course generally south to Kháusn, whence it turns westward, forming the boundary of

¹ This is apparently the old name for the Guge district above Kumaon and Garhwál.

Chaugadh to its junction with the stream from Malwa Tál. It thence turns south again and afterwards north by west, taking in on its right bank the overflow of Naukuchiya and Bhím Tál and at Ráuibág the surplus waters of the Sút Tál and Naini Tál brought down in the Baliya. Leaving the hills at Kathgodám, it flows by Haldwáni to the Tarái, where it becomes known as the Kichaha, and eventually joins the Rám-ganga on the left bank. The Gaula is largely utilised for irrigation purposes and supplies water to most of the clearances around and near Haldwáni. In times of flood it becomes a violent and dangerous torrent changing its stream through a wide bed.

Ghurdursyun, a patti of parganah Dewalgarh in British Garhwál, is bounded on the north by pattis Katholsyún and Bidolsyún of the same parganah; on the east, by patti Choprakot of parganah Chandpur, on the west by parganah Bárahsyún and on the south by parganah Chaundkot. The patwári of Kandarsyun residing in Khandgaon collects the land-revenue of this patti. There is a school at Bisalad. The patti is intersected by the western Nyár, along the left bank of which the road to Srinagar runs as far as Kota, where it crosses the river and passes up the valley of the Kota-gadh, which forms the northern half of the patti as far as the Mandikhál. The southern half is drained by the P'en-gadh and other small tributaries of the Nyár which flow into it on the left side.

Girgaon, a halting-place in patti Tallades of parganah Juhár in Kumaon, on the route by Bágeswar to Milam and the Unta-dbúra pass into Húndes, is distant eight miles from Tejam or Tejambugr, 69 miles from Almora and 12 miles from Munsyári. About two and a half hours' march from Jalath the Kúlamundi pass from Munsyári is reached by a bad road, impracticable for riding. On approaching the pass, the rock changes from gneiss to mica slate, which rock continues some way down and it then changes to gneiss with beds of white talc slate. After this a second ridge is passed by the Betúla-ghát before reaching Girgaon, a village with about eighty acres of arable land and a population of one hundred. The survey pillar near the village has an elevation of 6,568 feet above the level of the sea.

Girthi, a river of the extreme north-eastern portion of parganah Paínkhanda in Garhwál, takes its rise on the western slopes

of the Kingri-bingri range separating it from Tibet. Its northern branch is also known as the Doldunkhar and proceeds from the glacier below the Kingri-bingri pass and its southern as the Lanka which rises at the northern *dukha* or foot of the Unta-dhúra pass. Both unite near Topidhúnga to form the Girthi, which further receives several small streams on its left bank and on its right bank the Kio-gadh from Laphkel. Thence the course is nearly due west to its confluence with the Dhauli on its left bank a little below the village of Kúrkúti : north latitude $30^{\circ} 43'$ and east longitude $79^{\circ} 55' - 30''$. There was formerly a village and lead mine in the glen of the Girthi about twelve miles from Malári, but both are now deserted. The lead ore is a galena with considerable admixture of silver. A difficult track leads from Malári through the Girthi valley to the Unta-dhúra pass and Milam, but it is seldom attempted, though not particularly high. Major Smyth is the only European who has crossed it, but only in favourable seasons is it ever used even by the Bhotiyas, as it is particularly subject to avalanches.

Giwar Talla, a patti of pargana Páli Pachhaon in Kumaon, is bounded on the north by patti Lohba of Garhwál ; on the west, by patti Malla Chaukot ; on the south, by patti Talla Giwár and Walla Giwár, and on the east, by patti Katyúr Bichhla. This patti was formed from Giwár with 46 villages received from Malla Chaukot at the recent settlement. From the latter was taken the portion lying to the west of the Nagar peak in the valley of the Kálírau-gadh. It occupies the right bank of the Rám-ganga river by Ganái and the valley of the Khateár stream rising in the Panuwa-khál pass into Garhwál. There is a traveller's bungalow at Ganái, through which passes the roads from Almora to Páori and Lohba. There are copper mines at Kotyarba and iron mines at Baungarh, Muduwadhár, and Rámpur. The statistics of the Palla, Walla, and Talla patti may be shown thus :—

Giwar.	ASSESSABLE AREA IN BISIS.				ASSESSMENT IN RUPEES.				POPULATION.	
	Total.	Cultivated.		Culturable.	1815.	1820.	1843.	Current.	Males.	Females.
		Irrigated.	Dry.							
Palla ...	2,914	554	1,807	553	1,149	1,530	1,783	1,402	2,332	2,101
Walla ...	3,512	81	3,059	663	1,772	2,183	2,624	3,532	2,593	2,498
Talla ...	2,293	576	1,368	349	1,057	1,759	1,820	3,450	1,995	1,532

The incidence of the land-tax on the assessable cultivation per acre in the Palla patti is Re. 1-7-1 : in the Walla patti is Re. 1-2-1 and in the Talla patti is Re. 1-12-5 : the incidence on the total assessable area in the same patti is Re. 1-2-8, Re. 0-14-11 and Re. 1-8-1 per acre respectively. The patwári resides at Jamaniya, where there is, a school.

Giwár Walla, a patti of Páli Pachháon in Kumaon, is bounded on the north, by patti Palla Giwár ; on the west, by the same patti and Talla Giwár ; on the south, by patti Talla and Malla Dora, and on the east, by patti Kairáran. This patti was formed from Giwár at the recent settlement and comprises the valley of the Kotlár, a tributary of the Rám-ganga, joining it on the left bank at Gauái. The road to Páori and Lobba by Ganái passes to the north-west through the valley. (See GANAI.) To the north-east a chain of lofty hills commencing in Dúnagiri (7,346 feet) and continued by Sakhaldevi, Manbhudevi (6,932, and Godi on the Rám-ganga separates the Kotlár valley from that containing the quaint and picturesque lake of Turág. The principal places are Chiteli with its slate and iron mines, the iron mines of Burulgaon, Godi, Oleni, Sirolí, Sadigaon and Tilgurha. The statistics are given under GIWÁR TALLA. The important mines of iron in this and the Palla patti were leased in 1872-73 at Rs. 360 a year. The patwári resides at Chaukhutiya, where there is a school.

Giwár Palla, a patti of parganah Páli Pachháon in Kumaon, is bounded on the north, by patti Malla Chaukot and Talla Giwár ; on the west, by the former patti, Bichhla Chaukot, and Palla Chaukot ; on the east by Walla Giwár and on the south, by Walla Nayáu and Talla Dora. This patti was separated from Giwár at the recent settlement. The Rám-ganga flows through the centre of the patti from north to south and is crossed by the road from Dwárahát to Páori by Kadurai and Mási. The statistics will be found under Giwár Talla. The patwári resides at Mási, where there is a school. The old patti had four natural divisions, Gári-Giwár, containing Turág Tál : the valley of the Kotlár : the valley of the Khatsár or plain (*sár*) of criminals (*khát*), to which, like Katyúr and Chukám, criminals were banished because of its unhealthiness : and Giwár, where the iron mines are.

Golam La, an encamping-ground in patti Byáns and parganah Dárma of the Kumaon district on the route to the Lunpiya Dhúra pass. It is marked by a large gneiss rock standing out of the hill-side overhanging the confluence of the Nájan-gár with the Káli, which is from 1,500 to 2,000 feet below; the declivity almost precipitous. Elevation above the sea 8,000 feet; the village of Thin or the opposite side of the river is about the same height. Hence onwards a descent to the Nájan-gár crossed by a *sanga* or spar-bridge and across the Malpa-gár to the next camping-ground, Lámári, a small level piece of ground close to the Káli at the same elevation as Golám-Lá.

Gopeswar, a village on the route between Nandprayág and Ukhimath in patti Malla Nágpur of British Garhwál, 9 miles from Nandprayág and 10 miles from Chaupatta or Chobta on the left bank of the Balásúti stream, a tributary of the Alaknanda. It is the winter residence of the ráwal or chief priest of Rudrnáth, one of the five Kedár or temples dedicated to Siva and possesses a fine old temple of its own surrounded by a court-yard, repaired by Umr Singh Thápa, a Gorkháli general, in the first decade of the present century. In the court-yard is a trident¹ of iron with a shaft of the same material which bears on it an inscription and has also letters inlaid with copper, but now much defaced by time. The purport of so much as is intelligible represents the arrival of one Aneka Malla, "an illustrious prince who having extended his conquests on all sides, bringing together upon this holy spot sacred to Mahádeva, under the emblem of a pillar, the very sovereigns of the world whom his powers had overcome, and thus having re-established this same pillar of victory, he acquired reputation. It is a pious act to raise up a worthy foe when he has been humbled." It has been suggested that the name Anek Malla may probably be connected with the Anya Malla of the Neverit dynasty in Nepál, who flourished in the twelfth century. Similar tridents exist at Bárahát in Native Garhwál and in Nepál. (See J. A. S. Ben. V. 485.) There is a great brass image of a Pon Raja in the temple at Jágeswar in Kumaon which local tradition asserts to be one with the Rája who erected the trident at Gopeswar.

Gori or Goriganga¹ or white river, one of the most considerable feeders of the Káli river, takes its rise in patti Malla Juhár of paigauah Juhár in Kumaon in north latitude 30°-28' and east longitude 80°-10'. Properly speaking there are two branches, that known as the Ganka or Gankha on the east and the Gori proper on the west. The latter rises in an immonse glacier lying to the north-west of Milam, and divided from the glaciers giving rise to the Ganka by a considerable ridge running south from the Unta-Dhura ridge, by which the pass of that name leads to Hundes. This glacier was visited by Weller, and is thus described by him :—

The river comes out in a small impetuous stream, at the foot of apparently a mass of dirt and gravel, some 300 feet high, shaped like a half-moon. This is in reality a mass of dark-coloured ice (bottle-green colour), extending westward to a great distance, and covered with stones and fragments of rock, which in fact form a succession of small hills. I went along this scene of desolation for a long space, but could not nearly reach the end. Here and there were circular and irregularly-shaped craters (as it were), from 50 to 500 feet diameter at top, and some of them 150 feet deep. The ice was frequently visible on the sides; and at the bottom was a dirty sea-green-coloured pool of water, apparently very deep. Into one of these craters I rolled down numerous large stones from off the edge, and in a few seconds huge masses of ice rose from below, seemingly detached by the agitation of the water. The bases of the hills on either side and frequently far up their faces are one succession of landlips.

He adds that the source of the Gori was formerly opposite Milam, and a Bhutiya told him that within his memory the snow-bed had receded some three to four hundred yards in forty years.

Webb found the stream at its exit from the glacier twenty-eight feet wide and four deep, and from its coldness and great rapidity altogether unfordable. There is no passage up the gorge beyond the glacier. The elevation above the sea of the point of emergence from the glacier is, by barometer, 11,543 feet. The great accumulation of snow in the gorge results from the fall of avalanches, which Webb observed to cause in a few days an increase in the thickness of the stratum of upwards of forty feet. Hence, notwithstanding the extraordinary rapidity of the stream, resulting from a fall in some parts of its bed of 800 feet per mile, the river is overlaid with deep snow for a considerable distance below its source. It first takes a south-easterly direction for four miles, to its confluence with the Gankha a little below Milam. Though the Gankha has greater length of course by about twelve or fourteen miles and a greater volume of water at all seasons than the Gori, the latter gives its name to the united stream. For some miles below the confluence, the stream varies in width from twelve to twenty yards, and runs with such extraordinary violence and rapidity, as in many places

¹ The Gauri of Traill; Goree of Webb, Weller, and Manson; Goree Ganga of Garden; Gaura, Gauri, or Gaurani of Wilford, who identifies it with the Agorani of Megasthenes; *Stat. Acc. Kum.* 140; *J. A. S. Beh.* 1842, page 110, *ibid.* XI, 1167; *As. Res.* XIV, 410.

to resemble a cascade tumbling down a rugged face of rocks; in others it is hid below a continuous mass of ice and snow. In forty miles, the declivity of the waterway is 8,599 feet, or upwards of 160 in a mile. It receives on the right and left many torrents, none very considerable; and, continuing its course in a southerly direction, so as totally to run about sixty miles, falls into the Káli on the right bank immediately below Askot in north latitude $29^{\circ}-45'-8''$ and east longitude $80^{\circ}-35'$, at an elevation of 2,127 feet above the level of the sea and with a breadth of about 110 feet.

The road by Burphu and Tola to Rálam passes down the left bank as far as Tola. Along the right bank is the ordinary road by Ganagarh, Martoli, and Laspa to Bágeswar. The principal tributaries on the left bank are the Rálam river, the Madhkani and the Seragarh, and on the right bank the Jamiyagarh. The Gori passes through Munsiyári with its numerous Bhotiya villages, but below it enters into a precipitous tract, which barely allows of the track from Munsiyári to Askot. Some distance up the glen of the Gori river above Milam is the Sunchi-kuud, a small sheet of water held in great repute as a place of pilgrimage. It consists of a small triangular-shaped piece of greenish water perhaps 100 yards by 80 in area. The fissures in the banks of the Gori here are narrow instead of being crater-like; and the ice where visible is more of the colour of snow. On the south side large accumulations of gravel are to be seen in the openings between the hills; and generally the sides of the hills in the vicinity do not appear so much cut up by landslips as lower down. (*Weller.*)

Goriphát, a patti or sub-division of pargannah Jubár in Kumaun, was created at the current settlement. It comprises, as its name implies, that portion of the old patti Talla Jubár that lies along the Gori river. It contains 57 estates separately assessed, comprising 106 villages with a population at settlement of 2,713 souls (1,263 females). The principal villages are Barniyagnon, Sela-Surai, Dhapa, Jainti, Nagariya, Ringu, Jalath, Surhing, and Wolthi: see further article BHOTIYA MAHALS. The patwári usually resides in Rathbi: there is a school in Sela.

Guin-Pani, a halting-place on the road between Páori and Kohdwára, 12 miles 4 furlongs 11 poles from Puriya-Ke-Manda and 10 miles 6 furlongs 33 poles from Dalmisain, the next stage, is situate about four miles from the left bank of the Nyár river in patti Karaundu Palla of pargannah Ganga Salán

in Garhwál. The route to Dalmisain from Guin-Pani ascends by the Dwári-khál pass and descends to the village of Diusa on the head-waters of the Kohdwára river, 2 miles 5 furlongs 29 poles. Thence by the Dhárgadh bridge with a slight descent to opposite the Danda Mandi thana, 4 miles 6 furlongs, and the Lisári rivulet to Dalmisain encamping-ground, 3 miles 3 furlongs 4 poles, situate in patti Talla Sila. The road from Barsuri (see *PURIYA-KE-MASDA*) follows by the Thanu-khál pass to the Dwári-khál pass, 3 miles 1 furlong 27 poles, and thence by the same route by Diusa to Dalmisain. The road is tolerably level throughout, but hot and low.

Gujaru, a patti of parganah Malla Salán in British Garhwál, is bounded on the north by patti Khátali; on the west by the Deghut river, which separates it from patti Bijlot Walla; and on the south and east by the Sult patts of ~~Kumaon~~. The patwári of Bijlot Walla, residing at Dungari, collects the land-revenue of this patti also.

Gumdes, a patti of parganah Káli Kumaon in Kumaon, is bounded on the north by the Sarju river separating it from Palla Waldiya of parganah Shor; on the west, by patts Regurabán and Chárál Malla; on the south by Khilpattiphát, and on the east by the Káli river separating it from Nepál. The principal villages lie along the hill slope and amongst them are Bind-Tyarhi, Sel, and Silanga. The assessable area comprises 4,585 *bists*, of which 1,560 are culturable and 3,025 are cultivated (34 irrigated). The land-tax yielded Rs. 1,046 in 1815: Rs. 1,373 in 1820, Rs. 1,546 in 1843; and now stands at Rs. 2,950, which falls on the whole assessable area at Re. 0-10-4 per acre and on the cultivated area at Re. 0-15-7 per acre. The population at settlement numbered 2,651 males and 2,261 females. The *gumti* holdings amount to 23 *bis*. Two villages were received from Regarubán at the recent settlement. This patti lies along the Káli, and only about one-fourth of the villages lie within the Káli valley; the remainder, amongst which are some good ones, occupy the upper portion of the hills. The patwári usually resides in Marlak: there is a school in Majhpípal.

Gumti, or **Gaomati**, a river of which the northern branch rises in patti Pindarwár of parganah Badhán in British Garhwál and

the southern branch rises under the Birchuwa peaks (8,042 and 7,427 feet respectively) and Gadwalbúnga (6,950 feet) in patti Mallé Katyúr of purganah Dánpur in Kumaon. These unite close below Baijnáth in latitude $29^{\circ}54'-24''$ and longitude $79^{\circ}39'-28''$, and flowing through the Katyúr valley join the Sarju on its right bank at Bágeswar in latitude $29^{\circ}50'-15''$ and longitude $79^{\circ}48'-52''$ at an elevation of 3,143 feet above the level of the sea. The elevation at Baijnáth is 3,545 feet. The valleys of the branches and the main stream are wide and fertile and support many villages and tea factories. The principal villages on the banks have been mentioned in the patti notices. The road between Baijnáth and Bágeswar follows the left bank of the Gúmti and the road from Almora *via* Someswar to Karnprayág crosses this river near Baijnáth and passes up the valley of one of the feeders of its northern branch.

Gún, a halting-place and traveller's bungalow on the route between Lohughat and Pithorágarh, distant nine miles from the latter. There is a shop for the sale of grain, but no servants or utensils at the bungalow. The view hence down the valley of the Sarju towards Rámeswar is very fine and from Thákil above, the Nipál hills are seen and the valley of the Káli. From Chhira to this place the Sarju is crossed by a bridge, and below it is a large pool in which as at Dhikuli on the Kosi, Bágeswar on the Sarju above and Hardwár, the fresh-water shark called *gunch* (*Bagarius Yarelli*) is occasionally seen. Above near Rámeswar is another pool in which there is a huge boulder worshipped as a form of the ling. From the Sarju, the road turns to the right up the bank of the Guusk or Jamír (citron) river, presenting the finest rock scenery in outer Kumaon. The torrent roars at a great depth below, veiled by the most beautiful woods; the north bank rises in a splendid façade of crags called Barúri, to the north-east of which is a still loftier and precipitous range called Masán and Bissar, amongst the declivities of which are the villages of Ják-Bhát, Purañ, and Bálakot. There are several fine cascades from the precipices, which are all apparently limestone. At the Gún bungalow there is a remarkable orange-coloured rock of rhomboidal cleavage and low specific gravity, it is probably a clay-slate altered by the action of trap, a vein of which comes to the surface of the mountain a few hundred feet above the village of Gún. From here to Pithora,

the rock is chiefly clay-slate, which forms the basis of Thákil. At Pithora, the rocks are generally slate and limestone, the latter in tabular hills. At the base of Fort Loudoun there are some trap boulders which Horbert states were only detached from the crown of the hill when the works were raised in 1815. On the roadside close to Gún, the *Phoenix sylvestris* occurs of all sizes up to thirty feet and to the east, the slopes of Thákil are adorned with the *findora* (*Lilium Wallichianum*) growing six feet high, and producing one to three white blossoms occasionally a foot in length. The laburnum (*Edwardsia mollis*) and *stdli* (*Rhynchoria pseudo-cajan*) or *phúsur-patz*, bearing hairy yellow blossoms, also occur. The common *chir* pine covers lower Thákil with an occasional chestnut. Beyond Gún, the road leaves the Jamír and passes up a pretty cultivated glen to Tuli. Thence the path leads down to Tharkot, the acclivities of the surrounding mountains cut down into cliffs or rounded into rocky knolls are covered with thickets of runnel (*Rhus parviflora*) of which the withered leaves give a heathery appearance to the place. From Tharkot the road rises gradually to Aicholikhán (one of the sources of the Jamír), from which is obtained a view of the Shor valley and Pithoragarh.

Gunka, or Gankha, the name given to the eastern branch of the Gori, which it joins near Milam, has its source in patti Malla Juhár of Kumaon in two streams—the one on the west called the Uta or Unta, which rises at the foot of the Unta-dhúra pass into Tibet; and the other on the east rising from the Lisár glacier. It contains a greater volume of water than the Gori, and has a longer course. In the upper part of the glen, during a fall of snow or a thaw, the descent of stones is almost continuous from the earthy precipices overhead, and at such times the road is dangerous. Rain is never-very violent here, but whenever any falls, down come these avalanches of stones. Some of the latter are suspended on the tops of the ravine precipices formed from the *débris* of the adjoining mountains which rise in numerous places into sharp peaks and are in miniature, the resemblance of some of the more lofty points. Above Dúng, the river is crossed by a bridge of rocks with stones piled into the crevices, and about half a mile above this natural bridge, the stream is overlain for some distance by a huge bed of snow 12 feet wide and about 300 feet thick. The mass of snow

has a regular stratified appearance, and dips to the south-west, the reverse of the neighbouring mountains. The Uta, flowing through a small valley, enters it above at a similar opening to its exit.

Gurársyún, a patti of parganah Chaundkot in British Garhwál, is bounded on the north by patti Ringwársyún; on the east, by patti Pingala-Pákha; on the south, by patti Badalpur Malla, and on the west, by patti Maudársyún. The road from Páori by Seriyagár and Bijoli to Kohdwára passes through this patti, which on the south is drained by the Machlád river, an affluent of the Nyár (eastern). In 1864, fourteen villages were received from patti Taláin, five from patti Khátali, and one, Halúni, from Badalpur. The patwári of Pingala-Pákha collects the land-revenue of this patti also.

Gwálkura, a village and halting-place on the middle route from Páori to Almora in patti Choprakót of parganah Chandpur in Garhwál, lies in latitude $30^{\circ}-4'-8''$ and longitude $79^{\circ}-0'-24''$: distant 9 miles 1 furlong 5 poles from Sinkhet and 9 miles 1 furlong 10 poles from Kainúr. The road hence to Kainúr passes up by Sainji to Dhúlet, 1 mile 6 furlongs 3 poles. If travelling from Kainúr and it is intended to halt at Chhipalghát traveller's rest-house instead of Gwálkura, the coolies should be changed at Dhúlet. From Dhúlet the road follows the stream to the Panji-khál pass north of the peak of that name (7,900 feet) into the eastern Nyár valley; this portion consists of two steep ascents separated by a bit of level 3 miles 18 poles from Dhúlet. Hence a descent, in parts steep, leads to Ghatúri, leaving the Museti bungalow and tea plantation to the south about a mile from the road, 2 miles 6 furlongs 22 poles, on to the Kainúr traveller's bungalow by a steep ascent, 1 mile 4 furlong 7 poles. The road is tolerably cool and shaded by forest, but the ascents and descents render it somewhat fatiguing.

Gyúnlad, a halting-place on the route between Kotdwára and Kainúr by Khátali, is situated in patti Saindhár of parganah Malla Salán in Garhwál, in latitude $28^{\circ}-52'-30''$ and longitude $79^{\circ}-0'-50''$; distant 9 miles 6 furlong 14 poles, from Sanglakoti and 7 miles 5 furlongs 25 poles from Domaila. The road hence to Domaila passes to Jagarmall (bridge) and by Limbugair (bridge) and Cháki to Saindhár, 1 mile 7 furlongs 1 pole, thence by Saton-Khál to Kudola-dhár, ascending and descending, 2 miles 37 poles, from which it passes by Jamuri (bridge) and the Bináyak-khál to

Domaila, 3 miles 5 furlongs 25 poles. It here joins the road from Kainúr to Rámnagar.

Haldwáni, or Haldwáni, an important mart in the Chhakháta Bhábar, is situate in north latitude $29^{\circ}-12'-48''$ and east longitude $79^{\circ}-34'-17''$, at an elevation of 1,434 feet above the level of the sea, on the Bareilly and Ránibág road, 16 miles from Naini Tál. The name is derived from the *haldú* trees (*Adina cordifolia*) in the neighbourhood. The population in 1881 were chiefly traders. Haldwáni was founded by Mr. Traill in 1834 as a mart for the hill population, living for a portion of the year in the Bhábar. Since 1850, the grass huts that first were sufficient have been replaced by substantial masonry houses and the population is now permanently resident owing to the improvement effected in the climate by the many clearances in the vicinity. It is now an important centre of commerce for the Bhábar, and the opening of the railway must enhance its importance. There is a dispensary and a police-station here, and the villages in the neighbourhood for the most part belong to Náyak colonies from Rámgar in Kumaun. Close on the east is the bed of the Gaula river, which is here largely used for irrigation and is about half a mile across. The road then passes along the foot of the hills by Naugaon and Jampokhri, to Chorgaliya, about 14 miles from Haldwani, to the east of which the Nádaur or Garra or Deoha debouches from the hills. Chorgaliya (thieves' pass) is an old and large clearing divided into the Malla and Talla villages with large settlements close by like Lakhman-Mandi and Náyagaon. Hence onwards to Barmdeo cannot be traversed in the hot weather and rains, as the cattle-tenders who are the only inhabitants leave the place at the end of March for the hills. From the Nádaur the road passes over the Kúrakot torrent, dry in the cold weather, to Hathgadh, behind which the hills recede into a beautiful bay. The rest of the way lies through dense forests of *sál*, *dhák*, *haldú*, *súj*, *jáman*, *aonla*, *rai-jáman*, *bhaliau*, *sahajna*, *kumbh*, *amaltás*, *roli*, *giwála* or *dera*, and *chula* or *chilara*, besides *Hibiscus lampas*. Near Jaulasál occurs *Ficus nitida*, *Trewia nudiflora* (*túmri*), besides bamboos and grass, both exceedingly high.

From Jaulasál, where there is a police station, a path leads to Durgapípal on the Nádaur in Talla Palbelon, celebrated for its groves of *tún*, and thence by the Ladhiya to Devi-Dhúra or to

Champawat. The pass from the Bhábar is known as the Himli pass from the peak of that name (3,864 feet). Some twelve miles along the old bridle-path is the Kalauniya hill torrent. There is a small mart for wild forest produce on the right bank of the Kalauniya (afterwards called the Jagbúra) at the foot of the eastern slope of the temple-crowned Airideo peak (3,793 feet). The road, a fairly good one passable for wheel traffic in the cold season passes by Dogári 16 miles, where there is a police-station and rest-house, thence crosses the Kalauniya three miles south of Chela, thence Chini police-station, eight miles from Dogari and thence by a good broad road to the new mart at Tanakpur. The old bridle-path is seldom used now. A road by the Timla pass leads to the Hadhaya, and it was by this route that Captain Hearsey invaded¹ Kumaon in 1815. From Chela the road to Barmdeo (q.v.) is passable for carts, and is now joined to the cart-road leading from the Sárda to the Ganges.

Hastings, or Kotulgarh, a fort situated in patti Sui Bisung of parganah Káli Kumaon in Kumaon, about 4 miles west of Lohughát on a ridge at the entrance of the valley 6,327 feet above the level of Calcutta in latitude 29°-24'-30" and longitude 80°-6'-5". It occupies a steep knoll 150 to 200 feet above the general level of the mountain, separated by a deep neck from a plateau east-north-east, on which stood an outpost called Raunj, from which Kotulgarh could be easily battered. The area of the fort is about eighty yards north and south and twelve or fourteen east to west, surrounded by a good stone wall eight to ten feet high and five feet thick. There is a reservoir, but no water, the nearest supply being under Raunj, a mile distant and a small spring to the west. Were the reservoir watertight and filled, the position would be a strong one; except from the east, the approaches are extremely steep. The fort was intended to command the fertile valley of Bisung to the south and west, but has been abandoned for a very long time.

Madden writes:—"Kotalgarh is fabled to have been the stronghold of the arrow-demon Bána Asura (Bánásur) Daitya, the son of Mahábali, who fought with Vishnu and his Suras and prevailed not, though the conflict was long and doubtful. No sooner was a Daitya slain, and his blood poured on the ground, than it produced

¹ *Gaz. XI, 658.*

a hundred others, that the greater the slaughter of the enemies, the further were the gods from victory. In this difficulty, Mahákáli was created, like Pandora, by general donations from the celestials, and by her were the giants at length exterminated. Among those who fell by her hand was Koitavi, the mother of Báuásur, who, with a coat of mail over her bust, and naked from the waist downwards, fought like an amazon on the battlements, which are said to derive their name from her exploits and appearance, Kotulgarh being interpreted by "the fortress, the abode of the naked woman." The received traditions of India locate Mahabalipur on the Coromandel shore below Madras, and Báuásur still further south near Devicotta; the learned Pandits of Kumaon, however, locate all these wonders at and around Lohughát, and affirm that Súi is no other than Sonitpur, "the red city," of the Puránas, the abode of Báuásur. The peculiarities of the soil at and around Lohughát explain the mystery. On removing the sod, in some places a blue, but far more generally a deep-red ferruginous clay is found to form the soil, and to this the people appeal as ocular demonstration of the legend: it owes its colour to nothing else than the blood of the giants. During the rainy season, the Lohu or "blood" river is similarly discoloured, and hence the name of the station."

Hawálbag, a hamlet six miles south-west of Almora in Kumaon, is situate on the left bank of the Kosi. It was formerly the headquarters of the civil administration and of the civil force known as the Kumaon local battalion, and now as the 3rd Gorkhas, which was relieved of civil duties in 1839. It was also the site of the principal tea-gardens when that industry commenced under Government auspices. The site is fine and picturesque, but much warmer than Almora. There are still some European houses and tea-gardens. The roads to Soneswar, Binsar, and Ránikhet pass through Hawálbág, and the Kosi is crossed by a fine bridge on the cart-road and also by an iron suspension bridge. North latitude $29^{\circ}38'40''$, east longitude $79^{\circ}40'43''$, at an elevation of 3,920 feet above the level of the sea. Opposite Hawálbág at Katarmal are the remains of a large temple dedicated to Aditya or the sun, and a cluster of small ones also in ruins owing to an earthquake.

Hinwal, *Hual*, or *Huinal*, a river rising in the ranges of patti Karoundu Walla, in latitude $29^{\circ}55''$ and longitude $78^{\circ}39''$,

drains the country to the south and west of the Nyár drainage area and taking a north-westerly course for about twenty miles turns due west and falls into the Ganges on the left bank at Phalari, about five miles above where it debouches into the plains at Rikbhikes. The Hiunwal forms the boundary between the Dhangu sub-divisions on the north and the Udepur patti on the south. Webb forded it in April five miles above its mouth, and found the bed forty yards wide and the stream sixteen inches deep with a moderately rapid current. In the cold season it is rarely more than ten yards' wide and in the rains it is twenty to fifty yards wide, and made use of to float down logs from the forests.

Idwalsyún, a patti of parganah Barahsyún in British Garhwál, is bounded on the north by patti Rawatsyún and Katholsyún; on the east by the latter patti and patti Nadalsyún; on the south by patti Gangawársyún and Sitonsyún, and on the west by Bangarhsyún. In 1864, Fatehpur was transferred to Katholsyún. The patwári of this patti collects the land-revenue of patti Katholsyún also; both aggregated Rs. 2,914 for land-revenue and sadabart and Rs. 86 for *gunth* in 1864, paid by a population of 6,582 souls. There is a school at Sirauli in this patti. The valley of the Garh stream, an affluent of the Kandha, comprises nearly the entire patti.

Iriyakot, a patti of parganah Mulla Salán of British Garhwál, is bounded on the north by the eastern Nyár river and patti Saindhár and Khátali; on the west by the Badalpur patti; on the south by the Painun patti, and on the east by Gujara. It lies between longitude $78^{\circ}53'$ and 79° and between latitude $29^{\circ}52'$ and 29° . The road from Páori to Dháron passes through this patti crossing the Nyár at Chauráuidhár, then by the Walsa-gár rivulet and up the Rikhini-khál pass into Painun. The patwári of Iriyakot resides at Chauráni in the patti and collects the revenue of Kolagár also. The land-revenue of the patti by the new settlement was Government revenue and sadabart Rs. 2,360; revenue-free and *gunth* Rs. 103; total Rs. 2,463. There is a school in Bhawan village. In 1864 three villages were received from Painun. There are iron mines at Pipali and Kholdandatoli.

Jadh-ganga or **Jahnnavi**, the western and longest feeder of the Bhágirathi, which itself is the western affluent of the Ganges, takes its rise in the Tíleri State on the southern slope of the water-

parting line between India and Tibet, in north latitude $31^{\circ}27'-30''$ and east longitude $79^{\circ}5'$. To the west of its drainage area, the surplus waters find an outlet in the Satlaj. The confluence with the Bhágirathi at Bhairongháti (*q.v.*) is marked by scenery of a terrific grandeur and sublimity, a characteristic of the entire valley to the junction with the Mana-gadh some twenty-one miles further up. The Mána-gadh rises in a large glacier to the west of the southern foot of the Mána pass and falls into the Jádth about six miles above Nilang. The main affluents of the Jádth are the Súmla-gadh from the north at the head of which is the Thágn-la, the most western of the two passes into Tibet from the Nilang valley. The Játthang-gadh from the south-west joins the main stream about seven miles above Nilang. Then comes the Mána-gadh from the east; this latter stream is fed from the south by a very large glacier whose head is only four or five miles from the *gau-mukh* or source of the Bhágirathi. Another branch rises in the peak to the west of the Mána pass known as Tára; and a third, the Chánganmu, flows from the north, from the direction of Muling. From the water-parting at the sources of the Jádth, the ground falls abruptly to the north, giving rise to the Hop-gadh, a tributary of the Satlaj. The Hop takes its rise in a glacier a little north-west of the Mána pass, first with a northerly course, and then north-westerly under the ridge, and finally northerly again falls into the Satlaj about twenty-five miles north-north-east from the eastern pass of the Jádth valley called Tsáng-chok-la. West of the Hop-gadh three other considerable streams appear to drain into the Satlaj from the northern slopes of the range at the head of the Nilang valley: in the most western of these at a distance of eight to ten miles from the Satlaj is the Tibetan village Tháng or Stáng. On the spur between this and the next stream is a Dokpa encamping-place called Gaudok or Gandoh. The third stream, the one nearest the Hop-gadh, has on its left bank, about twelve miles from the Satlaj, the village of Sarang with another called Karbak on the other bank, immediately opposite. About nine miles north-east of the pass on the southern face of a spur is Dokpa Aur, where the Jádths and Huniyas exchange their wares. One march beyond is Poling and two marches more Tsáparang or Chháparang on the Satlaj. From Poling a short march to the south brings one

to Muling encamping-ground, and thence there is a track in a general southerly direction past a small lake on the northern face of the water-parting line crossing the range some twelve or fourteen miles south of the Tsáng-chok-la, and going down the Chúnghanmu and Mána *gadks* to Nilang. It is, however, very seldom used.

To Mr. Kinney of the Great Trigonometrical Survey the credit is due for establishing on a firm basis the origin and course of the Jádhangga. Up to 1815, very little was known of the western head-waters of the Ganges. The idea adopted was that the Ganges formed one of the affluents from lake Mánasarowar, and flowing westward either forced its way through the snowy range by a subterraneous passage or fell over its brow in a cascade at Gangotri known as the 'cataract of the Ganges.' Mr. J. B. Fraser in 1815, and Messrs. Hodgson and Herbert who visited the *gan-mukh* in 1817, successfully combated this idea, and fairly indicated the position of the sources of the Jáhnavi. In 1867, two of the trans-Himálayan explorers surveyed the route from Shipke to Nilang: according to them the Thága-la pass is 16,810 feet at the crest. The next encamping place is Pulamsundo, 12,984 feet; Nonam, 12,583 feet; Nilang or Chorsa, 11,181 feet; and Makhpa village, near rest-house, 8,172 feet. It was not, however, until Mr. Kinney made his report on which the present notice is based that we know anything at all accurate about this tract. The Puránas explain the name of the river as follows: Jáhnu was a descendant of Soma and fifth in descent from Pururavas, the son of Budha and Ila, and whilst performing sacrifice he saw the whole place overflowed by the waters of the Ganges and getting angry drank up the river which by the intercession of the gods was restored as his daughter: hence the river is called the Jáhnavi. Jáhnu was the husband of Kaveri, who by his curse became the Káveri river. (Wilson's Works, IV-14.)

Jaintolsyún, a patti of parganah Chaundkot in British Garhwál, is bounded on the north by patti Ringwáryún; on the south by patti Maundársyún; on the east, by patti Gurársyún; and on the west, by patti Aswálsyún. The name Jaintol is derived from the caste who colonised the patti. The patwári of Ringwáryún resident in Gujarú collects the revenue of this patti.

¹ See GANGOTRI.

Jallath, a village of the Bhotiya tract known as Munsyári in patti Goriphat of parganah Juhár in Kumaun, lies on the route by Milam and the Unta-dhúra pass into Tibet, 93 miles north-east of Almora. The encamping-ground is near the village on the right bank of the Gori in latitude $30^{\circ}-7''$, and longitude $80^{\circ}-13'-10''$.

Jaspur, a town in the parganah of the same name in the Tarái district, is situate about $8\frac{1}{2}$ miles due west of the town of Káshipur and $53\frac{1}{2}$ miles from Naini Tál. The population in 1872, numbered 6,746 souls and in 1881 there were 7,055 (3,173 females inhabitants, of whom 4,225 (1,890 females) were Hindus and 2,796 (1,532 females) were Musálmans. The site has an area of 491 acres, giving 14 persons to the acre. The old name of parganah Jaspur was Sahajgar. The town is of modern growth and possesses few brick houses. There is a weekly market which attracts a considerable local trade in cotton goods and *gúr* or coarse sugar. Cotton clothes are manufactured to a small extent. The public health is better than in Káshipur as the site is higher and drier, and there is no tarái belt in the vicinity. The country around, too, has more the appearance of the plains proper, so that malaria is less rite and destructive than in the neighbouring town.

Jaunsár-Báwar, the hill parganah of the Dehra Dún district, lies between north latitude $30^{\circ}-31'$ and $31^{\circ}-3'-30'$ and east longitude $77^{\circ}-45'$ and $78^{\circ}-7'-20''$ with an area of 343.5 square miles. It is bounded on the north and east by Tihri; on the west by the hill states of Basáhr, Raiengarh, Taroch, Jubal, and Náhan or Sirmor, from the last of which it is separated by the Tons to its junction with the Jumna near Kálsi, and on the south by the Dehra Dún district.

In shape the tract is an irregular parallelogram wedged in at right angles to the Dehra Dún between the Tihri State on the east and the Hill States of the Panjáb on the west, occupying in its lower portion the *duab* of the Tons and Jumna.

Sub-divisions.

The name is derived from the names of its two principal sub-divisions, Jaunsár and Báwar, though in fact the parganah contains a third known locally as Lohkandi. Following Major Young, the boundaries of these divisions are as follows: Jaunsár is bounded on the north by Lohkandi; on the east by the

¹ This notice is based on the official reports of Major Young, Mr. Cornwall, Mr. Ross and Colonel Pearson and the memoir of Mr. Williams. ² G. I. (B. A. Dept.) 119B., 8th February, 1884.

Jumna, and on the west by the Tons to their junction: it therefore consists of a triangular tract having its apex at Káisi with a length from north to south of 18 miles. Lohkandi comes next to the north with a length of five miles, and then Báwar, with a length of ten miles, giving a total length from north to south of 33 miles, and a breadth at the widest of 23 miles. There are a few small patches extending still further north, and the tract known as Deoghar to the west of the Tons.

In 1883-84, the settlement was revised by Mr. H. G. Ross and

Khats.

confirmed by the Government of India.

The following table gives the names and statistics of each of the thirty-eight khats into which Jaunsar Báwar is divided:—

Name of khat,	Cultivated area in acres.	Assessment.	Number of cattle.					Assessment.	Area in acres of uncultivated cultivation.	Assessment.	Total demand
			Cows.	Bullocks.	Buffaloes.	Sheep.	Goats.				
		Rs.						Rs.		Rs.	Rs.
1. Bharm ...	640	1,023	450	510	..	1 540	2,700	116	130	71	1,300
2. Sell ...	1,092	1,740	1,218	1,020	48	927	1,292	181	248	100	2,182
3. Bahár ...	441	673	612	463	93	841	706	93	100	19	810
4. Phariár ...	619	990	1,200	641	140	811	1 112	169	108	23	1,114
5. Hamtár ...	1,040	1,661	777	901	..	84	1,251	134	232	184	2,149
6. Lakhwár ...	403	641	706	416	118	371	851	115	44	11	730
7. Bangaon ...	390	607	1,016	357	27	324	1,263	114	140	86	780
8. Koru ...	666	1,312	647	807	75	237	724	114	152	27	1,290
9. Mohna ...	218	345	414	247	..	479	541	60	100	22	341
10. Udpálta ...	406	790	315	485	4	159	454	54	160	81	852
11. Dhanau ...	461	625	607	221	..	1,701	1,664	109	81	14	788
12. Duár ...	391	737	401	225	21	837	720	67	249	52	658
13. Bisár ...	267	427	1,036	327	19	1,167	1,332	127	168	..	446
14. Masan ...	519	879	494	305	12	1,600	1,827	110	100	62	919
15. Eriman ...	405	648	685	311	12	369	555	77	101	49	396
16. Elli-Gothán ...	662	890	541	482	14	421	718	83	92	30	863
17. Tapiar ...	543	852	767	620	12	1,237	101	192	41	41	855
18. Athgaon-Chandan...	924	995	347	300	..	189	639	47	168	..	863
19. Athgaon-Upperli ...	390	624	251	198	2	772	1,777	140	172	184	1,288
20. Sūgnon ...	657	1,370	1,096	627	..	671	1,777	140	172	184	1,288
21. Rungau ...	70	112	109	41	10	131	..	14	44	5	101
22. Bisahai ...	1,002	1,002	1,143	592	..	654	1,920	147	189	89	1,337
23. Dhan ...	949	1,617	782	152	..	184	1,621	111	240	49	1,421
24. Baundar ...	668	1,368	1,031	742	37	900	1,257	136	400	94	1,002
25. Kalau ...	267	475	537	277	..	604	829	70	56	32	344
26. Rāua ...	391	625	614	307	..	228	773	85	58	12	416
27. Sandita ...	316	563	318	312	..	211	254	47	48	24	364
28. Kothi ...	44	70	49	37	..	80	98	5	..	10	42
29. Ravasa ...	105	108	140	71	6	33	129	10	44	10	83
30. Chhartári ...	131	209	141	80	38	118	148	23	166	13	112
31. Lakhau ...	298	468	149	144	..	554	557	38	146	61	263
32. Malota ...	175	181	106	90	..	60	260	17	24	8	90
33. Panjgaon ...	713	1,159	750	610	42	477	808	111	182	30	1,104
34. Deoghar ...	611	1,457	437	357	1	1,151	1,170	69	639	264	765
35. Báwar ...	682	1,060	519	340	18	744	690	81	504	186	865
36. Rūgnon ...	282	451	318	194	..	437	536	46	173	36	245
37. Punayár ...	130	217	221	95	..	481	792	33	86	24	178
38. Bāndhar ...	314	343	147	132	..	480	660	28	78	92	261
Total ...	19,763	29,990	20,930	13,690	771	21,774	53,000	3,111	5,984	2,180	27,920

The assessment on the cultivated land in column 3 has been made at Re. 1-9-7 per acre: on cattle in columns 4 to 8 at one anna per head for cows, bullocks, and buffaloes, and at a quarter of an anna per head for sheep and goats and the assessment on occasional cultivation in column 10 has been made at Re. 0-8-11 per acre, with additions for turmeric, ginger, and opium.

Jaunsár-Báwar is entirely composed of a succession of hills and mountains, so that, to quote the words of Major Young, "there is not a single spot of one hundred yards of level ground in the whole parganah." Mr. Fraser also writes:—"There are no spreading valleys, no gentle undulation of ground, on which the eye can rest with pleasure; all is steep and difficult, toilsome rise and sudden fall." The great physical feature is the ridge separating the drainage area of the Tons from that of the Jumna. Commencing from Haripur-Byás near Kálsi it runs west of Chakráta Deoban, and thence in a north-easterly direction to the Karamba peaks above Lokár. At Bairát, where the Mussooree road joins this ridge, there is a peak having an elevation of 7,399 feet above the sea, further north, near Kyáwa, another having an elevation of 6,558 feet. Then comes Deoban, 9,331 feet, another 8,730 feet, whence the range trends to the north-east, continued in Bájamari, 9,536 feet, and three other peaks, 9,200, 9,533, and 10,075 feet respectively, when it enters Tíhri and loses itself in the spurs of Bandar-punch. From the main range, ridges are given off on either side towards the great rivers. Each of these ridges also gives off lateral spurs, the hollows between which form the beds of torrents that feed the numerous tributary streams of the Jumna on the east and the Tons on the west. Even in the hills, Jaunsár-Báwar has the character of being one of the wildest and most rugged tracts, affording naturally very little level ground, and that only in small patches. The mountains are peculiarly rough and precipitous, there is much cliff and rock and few villages, so that the cultivation is necessarily small and very laborious. The whole rock almost is limestone, which no doubt gives the massy, irregular character to the mountains. The ravines are, as a rule, deep and sudden in their descent, often ending in dark chasms, sometimes wooded, but, as often, exhibiting bare faces of precipitous rock, covered, here and

there, with a fine wiry grass, and merely affording space between for the roaring torrent that has worn a way for itself in the lapse of time.

Half a century ago, the country on either side of the main ridge was thickly covered with noble forests of *deodár*, and it is along it and its spurs that the existing forests occur. The Deoban hill, a prominent feature in the landscape wherever the traveller proceeds, now contains but a few patches of *deodár*, though the south and east faces are well clothed with oak, chiefly *bánj* (*Quercus incana*) and *moru* (*Q. dilatata*), and on the top *karshu* (*Q. semicarpifolia*) is abundant. Below this last, but near the summit, *morinda* or spruce fir (*Abies Smithiana*) mixed with *Abies Webbiana* known under the same name, occur. But the glory of Jaunsár-Báwar is its virgin forests of *deodár*: on the Lohkandi spur, the Bodhiya, Mashak, and Kotikanásur forests; on the spur between the Banár and Chili streams, the Kaislohi forest; around the head of the Dháragád, the Totwa, Maura, and Lakhar forest, and to the west of them Chhijál, Koti and Bastil forests. To the west of the Tons is the Mandhaul forest.¹ But besides these, large forests of oak, firs, spruce and scattered patches of *deodár* fringe all the ridges and clothe the sides both of the main range and of the lateral spurs, and to the south near Kálsi we have *sál*, *bákli*, *dhóra*, *haldár*, *kusam*, *khair*, and *siru*, some of which run up for a long way in the hot and confined valleys of the Tons and Jumna to an elevation of nearly 4,000 feet. We have next the grey-oak, rhododendron and *Andromeda* between 5,000 and 7,500 feet: at the lower limit the *chár* pine (*P. longifolia*) and at the upper, blue-pine (*P. excelsa*) and the *deodár*, and above these the *deodár*, *moru*, and *karshu* oaks. There are four species of maple, horse chestnut, walnut, cypress, spruce, silver-fir, yew, and several species of *Pyrus*.

The Bodhiya forest lies to the west of Deoban about the Lohkandi peak, 10,188 feet. The northern portion is known as Kanani, and the southern as Bodhiya. Colonel Pearson writes:—

"The basin or valley in horizontal area may perhaps be about two miles in width by one in depth; but the numerous ravines and spurs which run down from the main ridge must give a much larger superficial area of forest. The rocks are limestones, and very precipitous and the ravines are full of a rich deposit of decayed vegetable matter, in which the *deodár* seems to spring up with great vigor

¹ Report 211A. 13th May, 1899.

wherever it has a chance, and thousands upon thousands of young seedlings may be seen coming up, literally as thick as corn in a field." But, except in places where the forest has been closed, the seedlings are not permitted to come to maturity, as many hundreds of sheep from the neighbouring villages come to graze, and by nibbling off the heads of the young shoots, reduce them to the condition of furze bushes. But the natural growth of the *deodár* in this well-protected basin is wonderful, and much still remains notwithstanding cuttings.

Mashak is situated on the north or opposite side of the main Lohkandi spur to Bodhiya. The ridge itself on that side is tolerably covered with scattered patches of *deodár*, intermingled with cypress on the higher ridges, and fir (chiefly spruce, mixed with some silver fir and *shit*) lower down. There are also oaks and rhododendrons. Around the village of Mashak itself there has no doubt been formerly a considerable *deodár* forest; but its contents have been largely cut down in past years; in no place can there be said to be a regular forest like Bodhiya. Eastward towards Deoban, the forests get thicker, and numerous patches of *deodár* are found among the firs and oaks. All along, however, the spruce fir predominates and forms the staple portion of the forest. On the northern side of the main Lohkandi spur there is a little forest, the nucleus of which is round a temple in a beautiful glen, about half-way between Lohkandi-gát and Deoban, overlooking one of the feeders of the Banár-gád. Immediately above the *deodárs* at Koli, there is one of the finest and most noble forests of silver fir and spruce seen anywhere. The side of the limestone hill, covered with a rich vegetable deposit, is somewhat steep, and the trees are all giants; and the forest underneath them being perfectly clear and free from undergrowth presents a very noble appearance. In a few places some young *deodárs* (of which a very few old trees are mixed with the firs) springing up under the shade of the silver fir, to the supersession apparently of the proper offspring of the latter. Returning to Deoban, and following the main ridge northwards to the Karamba peak, *deodár* is found scattered here and there sometimes in considerable quantities, especially on the west side of the range, and in the ravines, which are very precipitous, running down into the head streams of the Banár-gád. After running for about six miles along the east side of the ridge, a steep path leads down through a forest of oaks and maple, with some fir, to a spur of the Karamba peak, running down between the affluents of the Banár-gád and Chilli-gád. On this spur is situated the village of Kanani, and around and above it is the fine *deodár* forest known as Kaislohi. Along the main range leading down to this spur, and on the grassy slopes which run up to the Karamba peak from its base, some exceedingl y noble *deodár* trees are to be seen. These stand in clumps of five or six (more or less) in number, for the most part on little spurs or other places where a deeper deposit of earth remains than the steep slope of the hillside usually admits of. Indeed, for the whole distance down to the village of Kanani, little else but *deodár* is to be seen, mixed with some *Pinus esculens*. The destruction from burning the jungle for *Ahil* or temporary cultivation has here been very great. Crossing the Chilli-gád stream, and ascending by a very steep path the next main spur, which separates the Dhara gád valley from that of the Chhilligád, and the pargannah of Jaunseer from Báwar, the forests at the head of the Dhara-gád, known by the names of Totwa and Lakhan or Lokar, are entered. These are by far the finest, most extensive, and most perfect of all the *deodár* forests in the pargannah.

West of the Jákhni-Láni pass (7,050 feet) there is a high mountain in the deep bay, on which there is a pure *deodár* forest of considerable extent. From the steepness of the sides of the hill, the trees are not as large as others, but the timber seems exceedingly firm and well-grown. There is a magnificent view down the Rama-sara valley to the Jumna and across the high ridges to Bandarpunch, from the summit to this mountain. There is also an excellent view of the forests, of Lakhan and Totwa, on the opposite side of the valley. Descending this ridge the Chhajal spur is met, which, after dividing into two minor spurs, runs down into the Tons, near its junction with the Pabharu or Paban. Above Chhajal there has been a fine *deodár* forest, but it has been horribly mutilated for *khi* cultivation. Still there is a very considerable amount of good forest left, and much of the space that was cleared is again clothing itself with young *deodárs*. Proceeding down the ridge towards the Tons, we find that it separates itself into two minor spurs, on one of which is situated the village of Koti and on the other that of Bastil. These spurs possess two small but perfect forests of *deodár* mixed in the upper portion with a good deal of exceedingly fine *khi*. Crossing the Tons, by the *jhula*, on the Simla road below Kuti, and ascending to Mandhaul, in the larger ravine above the bungalow, stretching up to the Bairach peak, there is a magnificent *deodár* forest nearly pure."

The Jumna touches the district first near Lakhamandal in Khat Baundár, in north latitude 30°-44'-30", and there receives the Riknár stream on its right bank.

The Riknár, for some distance, separates Báwar from Ránasera in Tihri, and is of some local importance. Eight miles lower down the Jumna receives the Khatno-gád, which forms the boundary between Khat Taplár and Khat Bongaon; and further south the Seli-gád from Khat Seli, besides other minor torrents. After about 23 miles from its confluence with the Riknár, the Jumna turns west to its junction with the Tons below Haripur at an elevation of 1,529 feet above the level of the sea. About two miles east of this confluence the Jumna receives the Anláwa, which, rising on the southern slopes of Deoban, drains central Jaunsár. Its drainage area is bounded on the east by the main range already noticed, and on the west by a similar range of lower elevation connecting with the main range at Deoban. This latter chain therefore in the southern part of the parganah forms the water-parting between the Tons and Jumna systems. The Phaphara, Pabharu, or, according to Europeans, Pabar, rises in Basáhr, and flowing through Raiengarh joins the Tons on its right bank near Seniya between *khat* Deoghar and Báwar. The principal affluents of the Tons (*q.v.*) on its right bank are the Chandli, Dadu, and Saran streams from *khat*

Deoghar : on the left bank we have the Kirun-gád in Báwar, the Dhára-gád in Phaniyár, the Banál-gád in *khat* Bana and numerous other torrents. Canal-irrigation is impracticable owing to the character of the country ; but the cultivators lead the minor streams over their fields wherever available, and use the water-power for their mills. The Tons is bridged at Maidrath (3,172 feet) and Bastíl (2,960 feet) in *khat* Báwar and at Sangota (2,550 feet) in *khat* Barhm. There are bridges over the Jumna at Lakhwár (2,210 feet) on the Mussooree road ; an iron suspension bridge below Kálsi and close to it an iron girder bridge on the cart road. Floods are common and in some cases injure the fields. There are two main roads, (a) that from Mussooree to Simla by Lakhwár and Chakráta, and (b) the military cart-road from Kálsi to Chakráta. The latter is divided into two sections, one to Sáya in Bantár, eleven miles ; and the second thence to Chakráta, seventeen miles. This road is bridged, but not metalled. There is also a bridle-path from Sáya to Chakráta, nine miles. The first road in Jaunsár was constructed under the superintendence of Major Young in 1828 from Kálsi to Bastíl, 35 miles as the crow flies, with a branch to Rájpur. Roads are still much required and even good paths from four to six feet wide would do much to open up the resources of the parganah by affording an easy means of communication with Kálsi and Chakráta. Much has been done in this direction by the Forest Department ; but as these roads are principally for their own purposes, and lie through closed forest tracks, they are not of so much advantage to the people as they might be.

Taking the *khat*s from Lakhwár northwards, the character of their capabilities for cultivation and physical features are to be noticed, and we shall commence with the Jumna *khat*s :—

Lakhwár lies in the extreme south-east along the Jumna, and is crossed by the Mussooree and Chakráta road. It is composed almost entirely of terraced fields and the hills are dry and unproductive with little or no forest and a limited grazing area. A little turneric is grown.

Phartár lies immediately to the north of Lakhwár and has much the same character. The hills are precipitous, dry, and barren, little forest, not much grazing, a good deal of southern aspect, and a stony soil.

Bhaldár lies to the north of Phartár, and comprises the tract north of Nág:bi: bungalow on the Mussooree road and, like the preceding, is bounded on the east by

the Jumna. There is a great deal of good northern exposure in the cultivation, but little forest and not much grazing.

Kora lies to the north of Bhalár between the Seli and Dabred streams. Here the hills are dry and barren with very little forest and not much grazing, and, though very highly cultivated, not very productive. The Jumna forms the eastern boundary.

Seli is also bounded on the east by the Jumna and occupies the valley of the Seli-gád. It is one of the largest and finest khats running up from the Jumna to the rifle-range at Chakráta.

Bangaon lies to the north of Seli and is drained by the Ningál-gád; a portion of its cultivation extends as far as the northern boundary of cantonments.

Taplár lies to the north of Bangaon, and is drained by the Khaino-gád. It is bounded on the east by the Jumna and is fairly off for cultivation, though badly off for roads.

Baundér, to the north of Taplár, also lies along the Jumna, and though a very fine *khat*, is out of the way and unconnected with the rest of the parganah.

Turning now to the middle *khat*s we have:—

Panjgaon lies on the left of the Amláwa stream in a poor country, with bare hills, little forest or grazing, and is not very well off.

Seli-gathan lies to the north of Panjgaon between the main range and the Amláwa, and possesses little forest or grazing, otherwise it is a fair *khat*.

Udpálta, to the north of Seli-gathan, occupies a similar position, and like it has but little forest or grazing land. The fields are terraced and absorb much labour in repairs.

Birmau lies between Udpálta and Chakráta and had to give up much of its forest and grazing land to cantonments.

Bardua is a very small *khat* within Bangaon to the north of cantonments.

Mohna also lies to the north of cantonments on the upper waters of the Dáwan-gad. It has a deficient supply of grazing land, but a fair proportion of cultivation.

Dudr lies to the east of Mohna and is similarly situated.

Bisár lies to the east of Dudr, and is drained by the Bijád-gád; but cultivation is either backward or stationary.

Atjgaon-uparl lies still further east on the left bank of the Bijád-gád: it shows a good extent of irrigated land, though the population is migratory.

Bandér lies to the west of Chakráta, the cart-road running right through the centre of it, so that purchasers come up and carry away the surplus produce, potatoes, turmeric, and ginger.

Taking now the khats bounded on the west by the Tona, we have:—

Bána, on the south, on the right bank of the Amláwa stream. The soil is poor and does not grow the more valuable crops. Irrigation is not much used.

Budhál lies next, to the north, and is traversed by a path from Káisi, which crosses the Tona by a rope bridge at Tunyáya. There are fine table-lands, well irrigated, and good turmeric and ginger cultivation.

Silgaon comes next, drained by the Dháwad-gád and traversed by a road from Káisi.

Atjgaon-chandan lies to the north of Silgaon. There is a good deal of cultivation, permanent and temporary (*khat*), and a considerable area under ginger and turmeric,

Maleta lies to the north of the preceding, and is drained by the Maindár-gád and traversed by a road. It is a small *khat* and has no irrigation.

Disau is situate between *Maleta* and *Dhanau*, from the latter of which it is separated by the *Amliár-gád*. It is on the whole an average *khat*; but, owing to quarrels amongst the villages, not so prosperous as it should be.

Dhanau has lost some of its better lands by being enclosed as reserved forest, and is on this account somewhat badly off for grazing land.

Bharm lies to the north of *Dhanau*, and is very remote from markets; but there is a good deal of table-land on moist hills with a good northern exposure. There is some good temporary cultivation and a considerable amount of irrigation.

Masau lies to the east of *Bharm*, and has had a good deal of its area enclosed by forests. It is separated from *Báwar* by the *Banár-gád*.

Kalan or *Kailo* lies to the east of *Masau* on the left bank of the *Banár-gád*.

Lakhan lies to the north of *Masau* and *Kalan* on the right bank of the *Banár-gád*, and has lost a portion of its lands in litigation with *Silgaon*.

Besides these there are the small *khat*s of *Bangau*, *Chhartari*, *Kothi*, and *Samáta*, much mixed with other *khat*s.

The *Báwar khat*s are represented by :—

Báwar is much cut up with enclosed forests. Most of its villages are in a very backward state, caused as much by the apathy of the inhabitants as by the position of the *khat*, remote from markets, and with a more rigorous climate.

Bánadhar lies along the left bank of the *Dhara-gád*, and was formerly included in *Báwar* as a *khat* or sub-division of a *khat*. It is better off as to markets and grazing land than *Báwar*.

Panagár or *Phaniyár* lies to the east of *Bánadhar*, further up the *Dhara-gád* valley, and was formerly a *khat* of *Báwar*.

Silgaon lies further east still and is crossed by the *Simla* road. It, too, was one of the *khat*s of *Báwar*.

Deoghar is the portion of *Báwar* on the right bank of the *Tons*. All these *Báwar khat*s are at present assessed at low rates and possess some of the best arable land in the parganah with plenty of grazing land and the means for irrigation; yet successive observers state that owing to the general idleness of the people they are worse off than those in the lower *khat*s. Although for the last twelve years large forest works have been carried on in their midst, hardly a man took the trouble to earn the high wages offered when even ten days work would pay his quota of land-revenue for the year.

The zoology and botany of Jaunsár-Báwar has been noticed in

previous volumes. The domestic cattle are
Products. of the small black-and-red, short-legged

breed found throughout the hills, and are inferior to the plains cattle in size, strength, and as milch-cattle. They have increased very considerably of late years, as the following figures show :—

	Horned cattle.	Sheep and goats.		Horned cattle.	Sheep and goats.
1848	... 7,430	28,400	1860	... 32,300	50,100
1850	... 10,370	37,300	1853	... 35,370	54,260

They are subject to the same diseases as in Kumaun and Garhwál. There are not many buffaloes in the parganah, 771 according to the recent returns. The custom prevails of buying bull calves in the plains and keeping them for two years in the hills and then bringing them back to the plains for sale; the two years' residence in the hills is supposed to strengthen the animals very much and enhance their value.

Besides the timber of the forests the characteristic vegetable products are rice, *manduwa*, wheat, barley, turmeric, ginger, red-pepper, tobacco, opium, potatoes, gums, and a little maize. The rice is grown entirely in the valleys: some high, some low; requires good land, and is nearly always watered. A certain amount of dry rice is sown, but the people don't care to run risks with it, and so, as a rule, they keep their dry lands for *manduwa*, which is the chief article of food. The plant is most hardy, and will apparently grow amongst mere stones and shingle. It is a rain crop, but too much rain spoils it. A good year for rice is a bad year for *manduwa*, and vice versa. Wheat and barley are grown a good deal on the hill tops. The seed is sown in the end of September, so as to germinate before the frost comes on. These crops depend entirely on snow: if there is a heavy fall of snow the crops are good: if not, they are bad. Turmeric and ginger are the most paying crops grown: they are grown on the high hills and table-land already spoken of, and also in the valleys where there is good irrigable land. A few square yards of turmeric or ginger is quite sufficient for a family. The cultivation of potatoes is year by year increasing; and if the people will only be careful about their seed, it ought to continue a most paying crop. Potatoes are grown either on the high table-lands or on virgin forest soil on the slopes. The cantonment of Chakráta has been a great incentive to the increased cultivation of potatoes. Indian-corn is grown always at the village doors in small garden patches. Red pepper is also grown in considerable quantities all over the parganah; opium is confined entirely to the high hills. If there are no hail and severe thunderstorms, it is a most paying crop; but it is very risky, and requires a great deal of manure. Apricot and walnut trees abound; the fruit of the former is either exchanged amongst the people themselves or sold in Chakráta; that of the latter is largely exported. Tobacco is grown in small quantities for home consumption."

According to Mr. H. G. Ross there are three distinct styles of cultivation.

System of cultivation

Rice, for instance, is grown in terraced beds made along the edges of all the rivers and streams, but seldom at levels over 3,000 feet, although some few are as high as 4,000 or 4,500 feet; another style, and the most general, is that of terraces rising one above the other up the hill side. All these terraces have to be supported by stone retaining-walls, varying from a height of four to 10 feet. The expense of making these walls is very great in time and trouble, because the cultivators make the walls themselves. A landslip or an extra heavy thunder-shower will sometimes wash away a whole hill side of these terraces, thus either ruining the unfortunate cultivator, or involving him in fresh work for years to come. Wherever there is

any good land these terraced fields exist. There are very many little isolated plots where fresh terraces can be made and cultivation increased, but within village bounds there is nowhere a block of good untilled land in one place sufficiently large to form a separate village. Wherever it is possible, water is led on to these terraces from streams and springs: some of these '*kuls*' or small canals are carried great distances through most impracticable ground and at great expense. The third style of cultivation is carried out where the tops of the hills form small table-land, round and smooth. *Khats* that have many such hill-tops are considered the most favoured; the soil is always good and crops better than in the terraced lands.

All the larger landholders keep ploughmen of the Dom caste—*hdhis*—who are serfs or bondsmen of the landholders; they receive no wages, but are fed and clothed by their masters. Sometimes they are given a little land to cultivate for themselves, but they do not acquire any right in this land, their employers defray all their marriage expenses. If one of these serfs dies, the landholder has to look after his widow, should there be no other husband and children. If the widow marries again, she goes to the house of her second husband with her children; but the master of the second husband has to pay to the master of the deceased the amount advanced by him for marriage or maintenance of children. No account is kept of the money spent in food and clothing during the ploughman's lifetime, as he is supposed to work that off; but an account is kept of all money advanced for marriage or money spent in the maintenance of young children after the decease of their father. No interest is charged on these accounts. If the ploughman disagrees with his master, he cannot leave him until he pays off the advances against him, or until he finds another master agreeable to pay them for him. The landholders wanted very much to have a set of rules about these *hdhis* entered in the *rajib-ul-arz*; but as the system is opposed to British ideas, Mr. Ross refused to comply with the request. The landholders have once or twice brought complaints against *hdhis* to compel the return of the latter; the cases have, as a matter of course, been thrown out at once, and so the *hdhis* must know that, if they choose, they can leave and go where they like.

The Jaunsáris are very particular about their houses: they all have double-storied houses, and in many instances three and four stories. In the lower *khats* the wood work of these houses is *deodár* procured from the higher *khats*, but the covering is slate; in the upper *khats* the roofing is *deodár*, split planks being used. The upper *khat* people say there is no slate in their *khats*, but the reason apparently is that it is easier for the people to split *deodár* than to quarry slate. They have hitherto had as much *deodár* as they could use, and so there has been no incentive to look for slate. The people drink a great deal of a kind of beer made in the following manner:—In the rains they make thick cakes of the roots of some trees and barley meal; these cakes are stored up, and when they want beer they break up one of these cakes with some cooked *china* and *zawah*, and soak the mixture in water for eight or nine days; they then strain off the liquor and drink it and also eat the refuse. In December and January a great deal of drinking goes on, many people being drunk the whole time: all kind of work is stopped, and nothing is thought of but feasting and drinking. They shut up sheep in a room and feed them upon oak leaves. Each man takes his turn of killing a sheep and feasting his

brethren. Owing to the severity of the weather there is little or no work possible at that season except looking after the cattle, and this is left to the women; the Brahmans do not, as a rule, drink.

In 1827, the products of the parganah itself were sufficient for the consumption of the small population; but now considerable quantities of food-grains are imported from the plains. Generally speaking, the *khats*, situate on the road between Mussooree and Chakráta and one large *khat* in the neighbourhood of Chakráta itself are the best; the next or average class comprises the *khats* situate in fairly advantageous positions with reference either to Kálsi or Chakráta, and the last class are those which are at a distance from markets and those which are in the neighbourhood of large forests as well as those which have but little irrigated land to depend on. The area for the extension of cultivation is limited; but still there has been progress, the number of ploughs increasing from 2,400 in 1848 to 4,600 in 1860. Excluding the tract under Government forests, a late calculation gives the cultivated area as 18,763 acres (1,682 acres irrigated), and the cultivable area as 620 acres. The first-class land consists of manured land devoted usually to rice cultivation; and of this 9,979 acres and of second-class land 7,112 acres were dependent on rain. The reddish clay is considered the best for cultivation and that of a darker colour not so good. The worst sort containing sand and gravel is here known as *sankráni*.

There are only two classes of rent paid in the whole parganah.

Rent-rate. one is one-third of the produce, which is given by the cultivators of the temple lands and the common village lands. The other occurs among the non-occupancy tenants of Haripur and Byás, who pay their landlords one-sixth of the produce and some minor dues. The value of the produce of an acre of irrigated land is estimated at Rs. 24, and if sown with a second crop at Rs. 40. The average revenue rate in 1872 at half rates fell at Rs. 2-8-0 on irrigated one-crop land and Rs. 4 on irrigated two-crop land; Re. 1-4-0 on first class one-crop unirrigated land and Rs. 2 on the same with two crops; second class dry land was assessed at Re. 0-13-4 and land allowed to lie fallow, of which one-fourth is cultivated every year, at Re. 0-8-11 on this one-fourth. These assessments varied with the proximity to markets and the general character of each *khat*. The occasional cultivation may be

classed with the culturable, and so the average rate on cultivation was Re. 1-15-0 per acre and on the assessable area Re. 1-8-0 per acre: the figures for the whole province being Re. 1-9-7 and Re. 1-4-3 respectively. The result of the revision of settlement in 1883-84 gives a rate of about Re. 1-9-0 per acre on the cultivation. As in Kumaun, the local measurement is not in bighas, but in a measure of capacity called a *pátha*. The *kachcha* ser is called a ser; and a *pakka* ser is two and-a-half sers and four *kachcha* sers make one *pátha* of urd or rice; and the quantity of land sown by that amount of seed is a *pátha*. Sixteen *páthas* make one *don*, and twenty *dons* one *khar*. At the settlement the bigha of four to an acre was used. In the local measures, the practice here agrees with that in Garhwál and Kumaon (*q.v.*) before the *bisi* was introduced there.

The following villages¹ are held free of revenue chiefly to support the Mahásu-deوتا, and would otherwise be assessed at Rs. 154 a year, viz, Lakhamandal, Nard, Mendráth (Muindrot), Bartár, Hanol (Onol), Phartár and Chhatra.

The cultivators are either Rájputs or Brahmans, and all put their hand to the plough. In 1875, the agricultural population comprised 16,812 proprietors, the *maurúsi* cultivators of the local code, and 12,661 non-proprietary cultivators, the *ghair-maurúsis* of the code, and 10,597 labourers and others. Proprietors may sell or otherwise dispose of the lands held by them, but tenants can only dispose of their rights to the landholder whose land they cultivate. Tenants pay in cash (*khara*) or in kind (*kun*). If a proprietary cultivator runs away, his land should first be given to his nearest relative; but if he have none, the *sayána* of the *khat* should make it over to some other proprietary cultivator. If this be not agreed to, then the *sayána* should give it to some non-proprietary tenant, fixing the quota of revenue to be paid by him. If this cannot be arranged the land lies fallow and the quota is distributed over the whole *khat*. This is to prevent any of the Dom caste getting possession of the land, and might well be expunged from the local code. If the runaway returns and desires to resettle, he can claim his land within five years on payment of arrears accrued. If the *sayána* confers proprietary rights on a cultivator not possessed of

¹ G. O. No. 872A, dated 21st March, 1874.

them (*ghair-maurúsi*), then the latter pays a fee of two rupees to the *saydna*, four rupees and a goat to the *khat pancháyut*, and two rupees to the residents of the village in which he becomes a proprietary cultivator (*maurúsi*).

There have been several attempts at enumerating the people of Jaunsár-Báwar. In 1882, Colonel Young returned the number of landholders or cultivating proprietors at 2,469: in 1884, Mr. Ross gave the number of families at 829 *asámi-khudkáshis* and 2,421 *asámi zamíndárs*; the latter numbering 17,278 souls. In 1848, the former had increased to 5,755 souls and the latter to 19,471 souls. In 1860-61 the total of both classes numbered 30,585 souls. In 1872 the returns showed 40,046 inhabitants (23,114 females.) The census of 1881 gives a total of 45,117 (25,400 females). The population is entirely Khasiya, and comprises the usual divisions into Brahmans, Rájputs, and Doms. The first are chiefly Bhats or Sarasutis, the second Rawáts, and the third are Doms classed according to their occupations into blacksmiths, carpenters, and minstrels, &c. All worship Maháshu and towards the east are many who worship the Nágas. The people are interesting as showing a Khasiya population several centuries behind their brethren in Kumaon in civilisation and still preserving the peculiar customs that mark their representatives further west. The distaste for milk and the produce of the cow is a link in the chain connecting them with the people in the Indus valley to the present day, and with the Kátors of Chitrál, and fortunately we have accurate records of many of their peculiar arrangements. Of the entire population in 1881 44,184 were Hindus, 726 were Musalmáns (chiefly in cantonments), 140 were Christians, 48 were Sikhs, and 19 were Jainas.

The detailed figures of the census of 1872 give the castes and their numbers. Out of a total of 39,313 Hindus 4,371 are recorded as Brahmans; 18,985 as Rájputs, and 14,500 as Doms. Of the last 2,420 are entered as Bájgis or minstrels, the attendants on the Maháshus, 3,731 as Kolis, 3,204 as Doms, 2,866 as Chamárs and the remainder as Chanáls, Lohárs, Bádis, &c., thus accounting for 37,856 out of the whole Hindu population. If we further deduct 244 Jogis and 30 Gosáins, we obtain 1,183 members of other castes chiefly of plains origin. These figures show how very truly Jaun-

sár is a representative Khasiya tract and forms a very important link between the almost completely Hinduised Khasiyas of Kumaon and their brethren converts to Islám on the ethnical frontier in the mountains of the Hindu Kush, and apparently gives customs and practices of the Khasiya race in full force at the present day which distinguished them a thousand years ago. Jaunsár is a kind of 'sleepy hollow,' within the hills in which the changes wrought in the outside world have had but little influence until the British settlement officer and forest officer came amongst them, and on these two and on the influences from Chakráta much of its future prosperity or the reverse must depend.

The manners and customs of the people are of a character very different from the Hindus of the plains.

The local 'code.'

Some have received a semi-judicial sanction by being embodied in the famous *dastúr-ul-aml*, or 'Code of Common Law,' drawn up under the superintendence of Mr. Ross in the settlement of 1848. The most remarkable is polyandry, a practice declared by Major Young in 1827 to be on the decline, but which is unquestionably common to this very day. Indeed, a bachelor without brothers, it is alleged, experiences some difficulty about getting a wife. The marriage ceremony is conducted without much formality and is thus described:—

Only the Mia and Báwat castes intermarry with the Kunet and Bhat castes,

Brahmans, and Rájputs: the marriage ceremony is

Marriage.

called *ghajera*. The bridegroom's father gives the

father of the bride one rupee as earnest-money; the father of the young woman will give him a dinner of *puris* (cakes); this makes the betrothal binding. The bride's father having dressed the young woman in a *chola* (shawl), *daman* or *gajra* (petticoat) and *dhata* (head-dress) and having given her as many vessels, &c., as in his power, goes with all his relatives to the bridegroom's father's house, and the bridegroom's father gives them one or two dinners and a present. The bridegroom's father, if he declines to fulfil the contract, shall not take back his earnest-money; but if the bride's father retracts and gives the bride in marriage to any one else, he shall pay sixty rupees. When a son and heir is born alms shall be given according to the means of the parent; and if any one be in great sorrow, their relatives give them a he goat and a rupee. If any person of low caste runs away with the wife of a respectable man, either the person who runs away with her or any person who allows them to remain in his district must pay Rs. 125, or else the woman and her paramour must leave the district. If intimacy previously existed, the man should pay twenty-five rupees through the *seydas*. If a man of respectable caste seduces a woman of respectable caste,

the fine is sixty rupees. Women are free to choose their first husbands and to leave them if dissatisfied on condition, writes Mr. Williams, "of the second husband's defraying the expenses of the previous wedding. Younger brothers legally have only the usufruct of their senior's wife, for she and her children are held to be the exclusive property of the eldest brother. Hence he keeps both women and children in the event of the household being broken up, and the rest of the fraternity going to live elsewhere. The custom of polyandry is supposed to promote good fellowship among brothers, and is (or used to be) observed so consistently that if a mother-in-law dies leaving an infant son, the daughter-in-law is, properly speaking, bound to rear the boy and marry him herself when he attains the age of puberty. A married woman is called *mami*, and *mamu* is a common salutation when addressing a person not related to the speaker. It is almost needless to add that there is a considerable amount of freedom between the sexes. Another very marked peculiarity in the habits of the people is their extreme uncleanness, all the more conspicuous on account of the comparative paleness of their complexion and scantiness of their clothing, the nature of which is familiar to every one who has ever had occasion to make a journey to a hill station."

The local civil code is particular in the appointment of *saydnas*, and thus describes their duties:—"The head man of the *khat* or *mahd* is the *saydna*. He is to keep the landholders contented, to collect the dues of Government according to custom only, equal shares according to the capabilities of each one; to settle all quarrels; to look after the welfare of new cultivators, and to obey the orders of Government. If any cultivator does not pay his dues the *saydna* may sue him in court, and if a cultivator run away, the *saydna* may distrain his effects, and if these means fail he may redistribute the *phani* or revenue-roll, and must send it in before 1st April in each year, so that it may be examined before the seasonal cultivation commences. On the death of a *saydna* his eldest son succeeds; and if he be a minor or mentally or morally unfit for the office, the title remains with him, and his brother or any other son of the deceased may do the work as deputy. If a *saydna* so desire he can appoint his eldest son to the office in his lifetime, but his brothers have no claim to the office because of their being landholders. The *saydna* may, however, allow them to receive a portion of the *bisawata* or fees of office, and as a matter of fact it frequently happens that the individual shares are very small where there is a large family and some grumbling ensues; but the fees were primarily not intended as a family endowment, but as a remuneration for work done. In case of division of property, the *saydnachari* is not distributed. A younger son cannot take the title of *saydna*. If the eldest son dies with issue, such issue can claim the title, and no one else. When the eldest son dies without issue, the deceased's brother can succeed. In each *khat* there are several *saydnas*; but he whose authority extends over the whole *khat* is the head *saydna* and his village is the *khund* village. The *saydna* may be dismissed by Government for injuring the revenue, acting contrary to orders, oppressing the cultivators, wrongfully levying fines, &c. In such a case, the person who has the next best claim and is suitable for the office will, if approved by the superintendent, be appointed. Should a *saydna* desire to resign, he can do so thus:—First he resigns his claim to his brother, than to any other person; but the rightful owner cannot

so it so as to destroy the rights of the next person. In many *khat*s there is in each village an officer called *chakrduta*, to whom the *saydā* from his own share gives one or two rupees, or at the termination of any suit makes the landholders pay him something. The *chakrduta* works under the *saydā*, who may dismiss him and appoint another. If a *saydā* have to attend the court at Kāisi or elsewhere, he is entitled to a cooly as a servant and another to carry a load : he also receives a ser of flour from each landholder. In lieu of other dues, the *saydā* receives a cess of five per cent. and half an anna in the rupee on the total revenue paid by his *khat* to cover his expenses when employed on the business of the *khat*.

If a proprietor wishes to dispose of his land he must first, through the *saydā*, obtain permission of the shareholders in his village and also of the proprietors in the *khat*. If a person

Sale and mortgage. of his own *khat* desires to purchase it, he cannot sell to a stranger. In either sale or mortgage the person in possession is responsible for the revenue. In deeds of mortgage there must be a clause declaring that only the *samīddari* rights are mortgaged, not the land itself; but when the mortgagee takes possession, he is only entitled to it until his claim has been satisfied by usufruct or otherwise, or until the time agreed on has elapsed. The mortgagor is also responsible for the revenue and all changes of possession must be entered in the *phānt*. The mortgage can be completed only by permission of the *saydā*. No period is usually fixed, and no fees are paid except four annas for the deed which is registered by the *patwāri*. In cases of sale, fees are paid to the *saydā* and attesting witnesses. In regard to bargains it is unusual to exchange written documents. If a dispute arises and the debtor denies the whole debt, the creditor has to swear to it in the name of his deity; but if the debtor denies only a part, the creditor takes that part and makes an oath as regards the remainder. As regards interest, the debtor has to give eight *pakks* sers of corn at each harvest (called *hāt*) for each rupee until the original sum is paid up. If the debtor becomes insolvent, the creditor takes the original amount and foregoes the *hāt* or takes double the principal in coin. With regard to grain debts, the custom is that for one year, the original is increased by one-half, and in the second year the accumulated amount or whatever remains unpaid of it is increased by one-half. If the debtor becomes poor the debt is measured by three times the original amount. In Chharrāri, Malota, Kothi, Rangan, and Hariipur the entire family of the *saydā* is entitled to participate in the fees. One person is made *sadr-saydā* and all the others are *saydā*s. All the cultivators are *ghair-mauzās* and have not the power to sell their holdings, and the *saydā* can make them cultivate their lands or take the land away.¹

On the death of a cultivator, leaving a widow and young children, if the

Distribution of property. widow takes to herself another husband, he can claim the tenure of her first husband as a hereditary tenant

but in such cases it is customary to make a settlement to this effect in writing :— Two-thirds of the land so taken over shall belong to the children of the former husband and one-third to any children born of the second husband ; if, however, a cultivator should at his death be in debt and have no heirs, then whoever takes

¹ The rules of the '*dastir-ul-um*' were incorporated in the engagement papers for each *khat*, but have since been modified.

possession of his effects is liable for and must pay his debts. If four brothers have two or perhaps one wife between them, and four or five daughters are born, and one of the brothers marries again, the children are not shared between them, but remain with the woman and the woman cannot go to the younger brother, but must live with the elder; but the children are entitled to equal shares from the four brothers, which are paid to the elder. If they separate, the elder brother bears the expenses of the marriages. Goods are divided thus:—After deducting one thing of each kind and one field for *pítans*, i.e., rights on account of seniority and half of that field (*Asachá*) for the youngest, all the rest are divided equally among them. But if there should be any self-acquired land (by purchase, mortgage, &c.) or if there be encumbered land, it is also divided. The *sayéna* distributes the shares and receives one sheep, one goat, one dish, one weapon, and five rupees. The *panchdyat* receives five rupees and the villagers two rupees. But if they are poor no fees are levied and none are paid on cattle. If the mother or father be alive, the children with whom they live must provide them with a cow, plate, clothes, *Sudan currie*, but if there are two fathers or mothers, the second receives nothing. If any man has three wives and they have children in unequal numbers, i.e., if one have two and another three, at the time of sharing, the children all receive equal shares except that the son with whom the first mother has to live receives a little more. If two brothers have one wife and have two children at the death of the wife, and both brothers marry again, and after the marriage the elder brother dies leaving four sons at the time of sharing, after deducting the half of the whole property for the children by the first marriage, the remainder is divided into six equal shares; from these six shares two more besides the half previously deducted are given to the children by the first marriage. Daughters can claim no share in the paternal property; only the following is the custom:—that the father should provide whatever is necessary for the marriage ceremonies, and if he have any grown-up brothers he should get them married.

The system of deciding cases by oath in temples or elsewhere

noticed under Kumaon prevail also here.

Decision by oath.

One of the rules of the local 'civil code'

runs as follows:—"If there should be a quarrel with any other *khat* about boundaries, it is settled either by *panchdyat* or by making oath, but it is settled by oath only where it cannot be settled by *panchdyat*. The person in possession should take the oath, and if the *sayéna* is interested he must take the oath, and in case he should refuse the opposite party should be given the oath. Any quarrel about the lands in each *khat* is settled in this way." Owing to the evils inherent in such a system it was added that all decisions arrived at should be reported in fifteen days to the Superintendent and also any objections, in default of which the decision would be maintained. That this practice has a bad effect on the people themselves is shown by the following extract from a recent report:—

" Whenever the *saydás* settle a dispute relating to land, they should also be obliged to record their decision in the *patwári's* register, and if the custom of deciding cases by oath could be entirely abolished, the *parganah* would be much benefited. Under the rules of the "*dasár-ul-aml*" decision by oath was only allowed when no other mode of settling a dispute could be found; but in practice arbitrators invariably record in their decisions that the party in possession should take oath to confirm his possession and this practice tends to keep up ill-will for ever. I have done all in my power to discourage oaths, never allowing them to be taken when I could avoid it, as when an oath has passed between two parties, if anything happens to the person who took it, his adversary always declares that he took a false oath, and it is a sign of displeasure on the part of the gods, and for fear of further manifestations of their displeasure he at once relinquishes the land or property. The opposite party, however, is equally unable to take possession, and so the land, if that was the subject of the dispute, is left to lie waste. There is a similar superstitious custom by which the wrath of the gods is invoked against an enemy. If a man has a grudge against any one, he takes up some earth out of his enemy's field and lays it at the shrine of one of the gods with prayers and offerings. If after that any misfortune happens to his enemy, it is looked upon as a sign of displeasure on the part of the god, and the poor man has to relinquish the field and let it go to waste. These disputes are carried to such an extent that generations after the oath has passed they are recollected, and I could mention instances in which the parties or in case of a boundary dispute the whole *khát* will not eat or sleep in their opponent's village. I was the more particularly struck with the inconvenience resulting from this practice when the question of establishing schools was first brought forward, as I found that the boys from one *khát* were not even allowed to attend a school in their enemies' village; and to show the length to which this is carried I may state that though in years long gone past there was a dispute over the boundary of two *kháts* which has just been settled amicably before me, yet still the remembrance of the old oath remains, even though the parties are now on friendly terms, at least ostensibly so "

An oath by the *Mahásu* at *Hanol* is the most solemn that can be taken. A custom now prohibited, but which
Mahásu. is proved to have existed by many a ruined house and waste field, was that in cases of disputed possession a party took a stone from the field or a portion of the mud from the walls of the house and offered them to *Mahásu*, with the result that no one could cultivate the field or occupy the house—a very convenient way of annoying one's enemy. Another custom mentioned in the local code is that where the *Mahásus* ordered the land or house to be freed, this order was made known by the *Mallas* who came from *Garhwál* for the purpose. Some account of the *Mahásu* has been given elsewhere.¹ There were four *Mahásus*—*Básak*, *Pibásak*, *Baitha*, and *Chalta*. The first three

¹ *Gen.* XI. 336.

live in temples, the last moves about from *khat* to *khat*. The principal temple is at Onol or Hanol on the left bank of the Tons in Báwar at the north of the parganah. There is a second at Tahnu in *khat* Panjgaon to the east of Kálsi at the south and a third at Anwar ; whilst the fourth taking up his head-quarters in Bairat in *khat* Koru perambulated the parganah. Báśak and Pibásak have migrated to Tihri, and Baitha and Chalta are now the Mahásu of Jaunsár-Báwar. Mr. Williams gives another account of the origin of the worship of Mahásu :—

"According to Brahmanical traditions, at a remote era of time, a man ploughing in the parganah of Bukan (now Deoghar) saw a snake, which, erecting itself before him, said, I am sent by the Divinity raise near this place an image to be worshipped; call it the Mahásu deota and it will reveal to you laws that are to be obeyed. On learning this vision of the cultivator, some Brahmans made an image and placed it in the field where the snake had appeared, and after some time had elapsed it was inspired to give them the following instructions, the observance of which secure the devout from the evils of the present world and insure their happiness in the next, viz.—

First, never to sleep in a bed with four legs. Second, never to drink pure milk. Buttermilk is permitted, but it is meritorious to abstain from eating the butter, it being more praiseworthy to burn it at the places appointed for the worship of the Mahásu deota. Third, always to sacrifice the finest goats at the demigod's shrine, and if similar sacrifices elsewhere be abstained from—so much the better." Mr. J. B. Fraser mentions a temple at the village of Bankauli, not far from Lakha Mandal, in *khat* Baundar, sacred to Mahásu, whom he considers identical with Mahádeo. He describes the shrine, however, as being built on a Tibetan model."

The Onol temple is about forty miles from Kálsi, and is now the head-quarters of Baitha and Chalta. The latter used to visit Jaunsár and Jubal alternately staying for twelve years in each, much to the annoyance of the people. Mr. Williams tells us that with the Mahásu came fifty to seventy attendants, besides dancing-girls and others. It was, however, necessary to invite him through his Wazír, and such was the dread of his wrath that an invitation was seldom wanting. On receiving the invitation the deity was placed in a *palki* covered with silver and after certain ceremonies was escorted by crowds of worshippers to his new residence. Those unconnected with the deity were only fed for one day, but the regular attendants seldom remained less than six months or as long in fact as they received entertainment.

To defray the cost of the entertainment, collections had to be made from the different *khats* in the division at the rate of eight annas a house or more, according to the means of the proprietors. Many other contributions were also exacted, such as *ghí*, *goats*, supplies of various sorts, amounting altogether to a heavy tax upon the people, who attributed the occurrence of an accident in any village to the indignation of the unpropitiated Mahásu. To check these exactions, Major Young passed a summary order at Kálai, in the presence of the assembled *sayás*, banishing the *deota* and his attendants from Jaunsár-Báwar, and also commanded the Wazír to abstain from accepting any invitation on the part of Mahásu without the sanction of Government. In a recent report it is, however, stated that it continues to give trouble to this day.

The first Wazír whose name is on record was Rup Sinh¹. He died at Bastil in 1826; leaving two sons by different mothers. Both pretended to succeed to the Wazírship. Their conflicting claims caused two factions, and the dispute was referred to Major Young for decision. He decided the case in favour of Ugar Sen, the elder brother, but the adherents of the younger, Ram Náth, on their return to Bastil, repudiated the judgment and sent an invitation to the Mahásu, who made a visitation to the Kandi division, which materially interfered with the settlement recently concluded. The fine and imprisonment of the principal offenders put a stop to their excesses. The present Wazír, Karan Singh, resides at Bastil; he has fallen into evil courses and is held in small respect, not being even entitled to the compliment of a chair. It is, however, said that were he to reform, he would be, like the older members of the family, venerated as much as the deity himself.

The dialect of Jaunsár is almost unintelligible to the people of the plains and is akin to the *patois* spoken in the neighbouring states of Tihri and Jubal :
 Language. thus :—*gád*, 'a stream'; *pujhar*, 'wood'; *nyar*, 'grass'; *chiskiya*, 'burned'; *hannua*, 'to walk,' are words unknown in the plains.

There is little education, though a few schools have been established; the people, however, are anxious that their children should be taught, and a cess has been levied to provide a school in each

¹ Mr. William's note.

khat. There are numerous applications for schools; but until further funds exist, there is little hope of establishing a sufficient number; and without education the people must remain behind the rest of the British hill districts. In this respect as in others the contrast is not advantageous for the administrators of Jaunsár when compared with Garhwál and Kumaon, and one can well understand the complaints of the people that though a cess has been levied for the purpose, most of the *khat*s have still no schools. There is no jail and no police. The lock-up at Chakráta and Kálsi serves for the one and the *saydnas* for the other. Roads are still urgently wanted all over the parganah. The establishment of Chakráta has given it a good road from Kálsi, and has also been the means of keeping that from Mussooree to the cantonment in good repair, and the forest works on the Tons have necessitated the making of a good road from Chakráta to the borders of the district in Báwar. There was a line of road cut from Chakráta to the Tons on a direct line to Simla by Mr. F. Williams; but although the road would be very useful if the Panjáb Government would agree to make their portion of it, still it is not required on its projected scale so far as the district wants are concerned. The remaining roads such as they are can barely be kept in order with the funds available, and four feet or six feet paths might be multiplied all over the parganah with advantage.

Jaunsár-Báwar¹ came with Dehra Dún into the possession of the

Fiscal history.

British in 1815. The first settlement was made by Captain Birch for 1815-16 to 1817-18 at Rs. 16,347 a year, exclusive of miscellaneous revenue, customs, and transit dues collected at Kálsi, and amounting to Rs. 1,753. Captain Birch was succeeded by Captain Ross, who made the second settlement from November, 1818 to October, 1821 at Rs. 15,703 for land-revenue and Rs. 1,298 for customs. Captain Young took charge in April, 1819, and in 1821 made the third settlement, which was also for three years, from November, 1821 to October, 1824, at the same rate as before. This settlement appears to have worked well, as no coercive measures were necessary for the realisation of the revenue demand. The fourth settlement for 1824 to 1827 was fixed at Rs. 17,282 for land-

From Mr. G. B. C. Williams, B.C.S., Memoir on Dehra Dún.

revenue and Rs. 1,419 on account of customs and included Rs. 1,485 due to the chauntras and *sayánas* noticed hereafter. This settlement was extended for a further period of two years, and at its conclusion, in 1829, Major Young made further proposals for a new settlement. Before taking up this settlement we must refer to the peculiar machinery existing in Jaunsár-Bawár for the distribution and collection of the land-revenue which, though in many respects similar to that found in Garhwál at the conquest has many features peculiar to itself; and for this purpose we shall avail ourselves chiefly of Mr. Williams' careful summary.

The hereditary indigenous revenue officers constituted the machinery not only for collecting but for distributing the revenue. The parganahs of Jaunsár and Báwar were divided into *khat*s or collections of villages, at the head of which were officers termed *sayánas* similar in every respect to the *sayánas* of Garhwál and the *kamíns* of Kumaon. The four most influential *sayánas* were called *chauntras*, and formed a conclave (*chauntru*), to which was submitted the gross sum assessed on the parganahs as revenue. This they distributed over the *khat*s, and the *sayánas* of each *khat* re-distributed the sum allotted to the *khat* over each village within his jurisdiction. The village *sayánas* again fixed the sum to be contributed by each proprietor within the village. All were then jointly and severally responsible for the entire assessment.

The entire community had one maháján or banker, Diu Dayal Ram, resident at Kálsi, who became their surety (*máteámin*) for the punctual payment of the revenue on the appointed day. The surety paid up the revenue and debited the sum due by each proprietor to him as a personal account with interest from the date fixed for payment without reference to the date when the money was actually paid, and this was considered a lawful perquisite of the office. The *chauntras* were not only revenue officers, but had also civil and criminal jurisdiction, having "plenary power to flog, imprison, mutilate, and execute" up to a very recent date. As revenue officers they received salaries of Rs. 40, Rs. 60 or Rs. 100 a year. The *sayánas* of each *khat* had similar powers in a lesser degree within their own *khat*s, and enjoyed an allowance of five per cent. on the collections as *bisauñta* similar to the lambarjár's

fees of the plains. The emoluments of the surety were considerable: he had a quarter anna per cent. or one month's interest on the gross revenue termed *ganth-kholai* or fee for opening his money-bags, besides interest at the rate of Rs. 18·12 per cent. per annum on each of the four annual instalments calculated as due six months before the actual date of payment.

Such was the administrative machinery; and after consultation Major Young recommended that a proposal made by the *chauntras* to give Rs. 1,000 additional as land-revenue and to furnish 300 men daily for eight months to complete a road to Bastil from Kálsi should be accepted, and on this basis the fifth settlement from 1829 to 1834 was concluded, giving a land-revenue of Rs. 15,354 and a decrease of Rs. 505 in the customs. The next settlement for 15 years (1834-35 to 1848-49) was also the work of Major (now Colonel) Young, then also Superintendent of the Dún, at a revenue of Rs. 21,412, including customs and cesses. The land-tax amounted to Rs. 16,280. There is nothing on record to show how any of these settlements were made. The several officers appear to have made nothing more than a rough estimate of the capabilities of the parganah, and this being accepted by the *chauntru* was distributed over each *khat*, the *málsámin* at Kálsi collecting and paying in the revenue on due date to the tahsildári.

Previous to the annexation of this parganah to the Dún, an officer styled diwán was stationed at Kálsi, who performed all the duties of an amín and tahsildár.

To Bákir Ali, appointed diwán in 1818, Colonel Young attributes "the flourishing and orderly state of the parganah," and on Bákir Ali's obtaining the appointment of tahsildár at Dehra in 1830, Colonel Young recommended the abolition of the post of diwán at Kálsi. At the same time Din Dayal Rám, the old surety for the revenue, died, and between his son Kirpa Rám and the *chauntras* a fierce quarrel arose with no independent local officer present to interpose his good offices and settle their disputes. These matters came to Mr. Vansittart's notice in 1844, and he removed Kirpa Rám from office, who was again restored by Mr. A. Ross in 1846. On this the *chauntru* or assembly of *chauntras* demurred and set up a rival surety. They were met by an order from the Superintendent declaring them relieved of their functions for the time being.

The *chauntru* not only continued their opposition, but exacted a large sum of money to pay their expenses to Agra in order to appeal to the Lieutenant-Governor. This, with a visit from the deity Mahásu, whose Wazir was at this time particularly exacting, induced the people to listen to the remonstrances of Mr. Ross when he visited the parganah in 1849. The Governor-General happened to pass through the parganah in the same year, and was beset with complaints from the two factions and from the people themselves against both. The surety was accused of ruining the country by his exorbitant charges for interest and the *chauntru* were accused of unfairly assessing their own good *khat*s and transferring the burthen to the other and poorer *khat*s, which eventually involved them in debts which they could not pay off. To remedy this state of things a redistribution of the land-revenue became necessary, and arrangements were made by Mr. A. Ross to this end. The net land-revenue now stood at Rs. 18,006, to which was added Rs. 750 on account of roads and the items comprising the *bisaunta* or *sayána* dues, making a gross assessment of Rs. 19,750. The *kárkun* or village accountant's fees were fixed at Rs. 617, and those known as *ganth-kholai* at Rs. 293, so that the total charges of every description amounted to Rs. 20,660,¹ which eventually fell to Rs. 19,953. A regular settlement was made after an inquiry into the condition of each *khat* and its villages: the power and duties of the *chauntru* were abolished, and the management of each *khat* through its own *sayána* was established. These officers' allowances were confirmed at five per cent. on the collections as a remuneration for their trouble. The debts due to the surety were paid or remitted, and in future the landholders were to be relieved from the payment of the interest in anticipation hitherto a perquisite of the surety. The fiscal duties

¹ The actual charges and receipts in 1848 are thus given:—

CHARGES.			RECEIPTS.		
	<i>Hak bisaunta.</i>	Rs.			Rs.
Sayánás salary	1,000	Revenue ...	...	20,000
Chauntras' salary	400	Deduct charges ...	...	3,666
Road allowance	1,000			
Regular establishment	894			
Patwáris	180			
Peons	192			
Total	3,666	Net revenue ...	...	16,334

of the *chauntru* fell on the *saydnas* of the *khat*, and the joint responsibility of each sharer for the payment of the revenue was limited to his own *khat*, which became, in fact, a *bháyáchára* estate. The establishment was also reduced from Rs. 1,900 to Rs. 1,776 per annum. All these arrangements were subsequently sanctioned by Government, with the exception that the road allowance was raised to the original amount.

At the same time Mr. Ross drew up a code of law and procedure for the use of the local *pancháyats* in administering justice among themselves. This was compiled from the customs and traditions current amongst the people, only making alterations when these were repugnant to morality and common sense. Provisions, for example, were introduced prohibiting the practice of compounding felonies or the disposal of cases of felony, especially murder, by the *saydnas*; the accusation of witchcraft was made a punishable offence, as well as the practice of cursing the ground from motives of revenge. It states also the general principle that the revenue is fixed on the general resources of the landholders as well as of the land, on the number of sheep, goats, plough-cattle, labourers, quantity of land and its produce, walnut-trees, apricots, honey, &c. All trees are the property of Government, except a few near villages, which were included in the *chaks* and were planted by the landholders. The landholders have power to cut wood for making ploughs, houses, or for their own private use as firewood, but are not allowed to sell it; and those in whose *khat*s there is no *deodár* are allowed to bring it from the *khat*s they have been accustomed, subject to the same conditions, and the persons from whose *khat*s the wood is taken are not allowed to charge for it. They have a complete right to all grass and jungle and wild drugs and grazing rights. But other rights, such as mines, belong to the State and no one without permission can bring under cultivation waste land not included in his *chak*, and Government has the right of selling and letting that land to whomsoever it pleases. The new agreement paper states specifically the boundaries of the village and State forests which are all now demarcated by permanent boundary pillars.

During the currency of this settlement the *khat*s relieved themselves from debt, but still the state of the parganah was

generally so unsatisfactory that at its expiration, in 1859, it was not deemed advisable to raise the revenue, but merely to redistribute it again with the help of a block measurement of the cultivation. This, the eighth settlement, was effected by Mr. J. C. Robertson in 1859 for the years 1860-61 to 1870-71. It is remarkable because no attempt had ever before been made to measure the cultivation. The result of a plane-table measurement gave a total cultivated area of 21,603 acres, of which 164 acres were held revenue-free. The gross revenue was fixed at Rs. 21,525, from which should be deducted *bisaunta* or *saydna's* allowances, Rs. 1,042; *takna* or the allowances of *kárkun*, or village accountants, Rs. 1,830, and Rs. 1,000 for the repair of roads, leaving a net revenue of Rs. 18,695, which at the end of the settlement was Rs. 19,678. The surety's allowances and office were then altogether abolished. The revenue assessed in 1859 was collected without difficulty. In only one *khat* was it necessary to have recourse to any measure for enforcing payment and here it was due to embezzlement on the part of the *saydna*.

The next revision of settlement took place in 1870-73, and was made by Mr. W. Cornwall. The great feature of this revision is the demarcation of *khats* and their boundaries, especially in connection with the Government forests. The Resolution recites:—

"Under native rule the respective interests of the State and the people in regard to forest rights had never been clearly defined; and up to 1866 matters had been left very much to themselves in Jaunseer-Báwar, in consequence of which the forests suffered greatly. In 1869, the forest lands were divided into three great classes: from the first the villagers were entirely excluded; in the second they were allowed rights of grazing, fuel, and reclamation; while the third class was handed over to them under the condition that no alienations were to be made under any circumstances. The *saydnas* protested strongly on the ground that under this arrangement they had no guarantee of future enjoyment. Accordingly the Government of the time directed that all land not likely to be needed for forest purposes should be made over unreservedly to the *khats*; under the third class, forest land should be held to appertain to the respective *khats* under the proviso of non-alienation. This necessitated a fresh demarcation of forest boundaries, which was effected in 1873; but it was not till 1874 that the '*phantbandis*' or detailed demand statements were finally prepared and assented to, and that the revised demand came into operation."

The cultivation also was measured and maps were prepared on the scale of one inch to twenty yards, similar to those that were

made in Kumaun. With these were indices showing the area of each field, the holder and the demand payable by each sharer. The result of this revision was a total revenue demand of Rs. 26,181, which with cesses amounted to Rs. 29,495 at the end of the settlement, the previous demand being Rs. 19,695, thus giving an increase of one-third. The terms of the *wájib-ul-ars* were revised, and many of the unnecessary conditions of the old *dastár-ul-aml* were omitted and others were revised.

Under the previously existing arrangement the *sayána* distributed the quota of the revenue, as already explained, over the *khat*, and the village *sayána* over each village. Whenever the revenue-payer left his *khat* or through misfortune of any kind was unable to pay the revenue assessed, this was distributed by the *sayána* among the other cultivators; while any person dissatisfied was allowed to appeal. The new arrangements provided also for a report by the tahsildár on all items in the *phántbandi* or revenue-roll differing from the distribution of the previous year which should be sent to the Superintendent for orders before April, so as to give time for a proper inquiry before the agricultural operations of the year commenced. This was the principal change¹ introduced in the fiscal administration by the settlement of 1873.

Patwáris or village accountants were substituted for the *kárkuns* of the old arrangement, and a cess was levied to support them. On the whole the attempt to follow out the procedure adopted in the plains was not a success; and here, as in Kumaun, the resolution to insist on regular rent-rates, revenue-rates, and classification of soils resulted only in failure, gave an infinity of trouble, and left behind it not a single statistic on these subjects that could be relied upon. The country, the people, and the crops differ from the plains and its people to such a degree that no useful object can be attained by compelling both to follow exactly the same lines in detail. Here other matters exercise a considerable influence, population, aspect, nearness to forests, and the proportion of table to terraced lands. As observed by Mr. H. G. Ross, a village may

¹ The five *khags* of Báwar were each made into a separate *khat* or sub-division; and the office of *sadr-sayána* was abolished until now held by the Wazir of the Onol temple. Mr. Cornwall sent in his report (No. 109), 10th March, 1873, and Mr. H. G. Ross sent in a supplementary report (478), 19th December, 1874, but these were not taken up, and orders were not issued until (No. 917), 1st June, 1880, confirming the settlement for ten years.

have excellent land, but without cultivators it is of little use. The very best soil with a southern aspect will not produce crops equal to those on inferior soil with a northern aspect; a village with inferior land and possessing a good head of cattle or able to collect leaves from a forest will have finer crops than a village with superior land, but without these advantages for manure; again, there are dry hills and moist hills, and the latter produce far the better crops, though there is nothing to show whence the moistness comes and there is no difference in the soils. The *sayáns* refused at first to sign the engagement papers, but after some explanation that was done.

It was soon seen that the assessment of 1873 pressed heavily on several *khats*; and in 1883, Mr. H. G. Teath settlement. Ross was deputed to revise the settlement, accepting the records of the past and his personal experience as the basis of his proceedings. The assots on which the revenue was assessed by him were (a) the land; (b) the cattle; (c) occasional or temporary (*khil*) cultivation. To the first he applied the provincial average of Re 1-9-7 per acre on cultivation and Re. 1-4-3 per acre on the assessable area. To the second, in lieu of a grazing cess, he applied half the Dún grazing rates—two annas per buffalo, one anna per cow, and one pice per sheep or goat. Taking these rates with an additional rate for occasional cultivation, he worked out a maximum demand on each *khat* which should be worked on as the extreme margin to which the revenue may rise, but which local circumstances should be allowed to modify. The result of the revision was that out of a total of 38 *khats* Mr. Ross reduced the revenue in 15 and left 23 untouched. The previous demand for the whole parganah was Rs. 29,495, and this was reduced to Rs. 27,495 and confirmed by Government for twenty years.¹ The details of the statistics then collected have already been given. Another matter connected with this settlement is the preparation of *phard-phánts* or standard revenue-rolls distributing the total assessment over the villages and cultivation within a *khat*, whilst leaving the responsibility of the whole *khat* for the revenue untouched. This may be changed by variations in area of cultivated land, in number of adult male cultivators or number of cattle, but it

¹ G. I. (R. A.), 119R, 8th February, 1884.

will serve as a guide to officers hereafter when disputes arise with the *saydna* regarding the distribution of the *khat* assessment. The *saydnachári* system, too, was retained.

There were twelve *patwáris*, which were now reduced to three, one for Báwar and Lohkandi and two for Jaunsár; and one *kanúngo*, a descendant of Lala Din Dayal, the former *máízámín* of Kálsi. Amongst the descendants of the *chauntras* are two—Debi Singh, *saydna* of *khat* Udpálta, and Jwála Singh, *saydna* of *khat* Samálta—who long ceased to take any interest in the *parganah* or afford any assistance to the local officers. For the descendants of the other two *chauntras*—Ram Das, *saydna* of *khat* Koru, and Moti Ram, *saydna* of *khat* Seli—Mr. Ross obtained a grant of Rs. 100 each for life, with the title of *chauntra*, in recognition of their past services, renewable in either case to a direct heir who is reported qualified and to be a suitable person to whom the grant may be continued. Arrangements, too, were made by which the forest rules where they pressed hardly were relaxed, and provision was made for the requirements at Chakráta for fuel and proper forest conservancy, without undue or unnecessary restriction of the privileges of the villagers.

From 1815 to 1829, the *parganah* remained in charge of one officer immediately subordinate to the Governor-General's Agent at Dehli, and who had certain civil and criminal powers, aided by the *chauntru*. When Regulation V of 1829 rescinded Regulation XXI of 1825, the *parganah* administration fell into the same state of confusion as that of the Dún, and, in 1830, it was formally placed under the Superintendent of the Dún. The subsequent history must be given in Mr. Williams' own words:—

“Years after, Act XXIV of 1864 vested the administration of justice and the collection of the revenue in such officers as the Lieutenant-Governor might appoint who were to be guided by the rules framed for the Taráí district under Act XIV of 1861. Notification No. 1170½A, dated 29th April, 1864, supplemented the Act investing the Superintendent with the general administration of the sub-division, and empowering him to assign to his assistants such executive, fiscal, or judicial duties as they might be qualified to discharge, in subordination to the Commissioner of Meerut. The

functionaries to be employed in the administration of civil justice were the assistants to the Superintendent, the Superintendent himself, and the Commissioner of Meerut; in the administration of the revenue and criminal justice, the tahsildār of Kālsi, the assistants, the Superintendent, and the Commissioner. The previous resolution defined the powers of these officers and procedure to be observed by them. The Superintendent received authority to try original suits without limit of value and hear regular appeals from the decision of his assistants, who had power to try original suits not exceeding 1,000 rupees in value, while a regular appeal lay from the Superintendent to the Commissioner, and where the two latter differed, Government had the option, if petitioned, of referring the point at issue to the decision of the Sadar court (now High Court). A special appeal also might be made to the Commissioner from the decision of the Superintendent in regular appeal.

The tahsildār could only try petty criminal cases made over to him by the Superintendent, nor did his powers extend beyond the infliction of 50 rupees fine or a sentence to six months' imprisonment. The assistant likewise, unless specially empowered, was restricted to the trial of cases so referred, and his powers only extended to the infliction of a fine of 100 rupees or a sentence of twelve months' imprisonment. The orders of both were appealable to the Superintendent, who had the ordinary full power of a Magistrate of district. Appeals lay from him to the Commissioner of Meerut, who was also empowered to revise the proceedings of any subordinate authority, and to him all cases of a more heinous nature were to be committed for trial; but in those of murder and all others demanding a more severe punishment than fourteen years' imprisonment, his sentence could not be carried out without the concurrence of the Judge of Meerut, or, in the event of a sentence of death, without the confirmation of the Nizāmat Adālat (now High Court).

The suits cognisable in the revenue courts were divided into two heads, summary and regular. The summary suits were thus classified: (1) suits by *malgudars*, &c., against tenants or of tenants against sub-tenants, for arrears of rent; (2) by *lombardars* against under-sharers for arrears

of revenue; (3) by *mālguzárs*, &c., against agents for production of accounts and recovery of money due; (4) by farmers of excise duties against licensed manufacturers and vendors for recovery of arrears due on sub-contracts; (5) by cultivators and tenants against *mālguzárs*, &c., and of under-sharers against *lambardárs* for undue exaction of rent or revenue; (6) of same against the same for illegal dispossession, actual or attempted. The period of limitation fixed for the institution of suits under clauses I, II, III, IV was twelve months, and for the institution of those under clause V, VI, sixty days. The regular suits were defined to be: (1) suits about the *mālguzári* right in land, or the right to registered revenue-free land, or land held on a quit-rent, or claims to share in the profits or rent of such land or in manorial privileges not reserved to Government; (2) summary suits (as classified above) when from lapse of time, or on other grounds, they cannot be tried in the ordinary way; (3) suits by *mālguzárs*, &c., for rent of land held in excess of or contrary to lease; (4) suits by the same to oust tenants-at-will not in default, at the end of the year, or at the expiration of a lease; (5) suits by the same for enhancement of rent. Regular appeals from the revenue courts under the *Tarái* rules lie solely to the Commissioner, and in the case of summary suits only on the question whether the issues raised are fit to be tried summarily or not, his decision on the latter point is final. In regular suits a special appeal lies from his order to the Board of Revenue.

A regularly-organised police under Act V of 1861 was not introduced. The people themselves were, as heretofore, to extemporise a rude constabulary in case of necessity, and the Superintendent, being immediate head of the police, was to be guided by the spirit of the old Regulation XX of 1817, or by its provisions, wherever applicable. As a matter of fact crime in the *parganah* is almost unknown: of theft there is little or none; and as the people are not of a jealous disposition in regard to their wives, murder or crimes of violence seldom occur.

The appointment of a Cantonment Magistrate to Chakráta under Government Order No. 415, Judicial (Criminal) Department, dated 2nd April, 1869, subsequently suggested some modifications in the judicial

system. By Notification No. 1393A, dated 19th September, 1872, the Lieutenant-Governor, in virtue of the authority vested in him under section 2, Act I of 1865 (the Acts and Regulations Extension Act), extended the operation of the Code of Criminal Procedure (Act XX of 1861) to Jaunsár-Báwar, and under sections of the same Act the Superintendent of Dehra was invested with the powers of a District Magistrate in the parganah, the Cantonment Magistrate of Chakráta with the local jurisdiction of a sub-divisional Magistrate under section 230, Code of Criminal Procedure, and the powers of a Magistrate as defined in section 132 under section 234, Jaunsár-Báwar being declared a sub-division under section 18; the Judge of Saháranpur with the powers of a District and Sessions Judge within the parganah under section 2 of Act XIX of 1871 (the Bengal Sessions Court Act). A Resolution of the same date (No. 427A) extended to the sub-division the operation of the Code of Civil Procedure (Act VIII of 1859, as amended by Acts XXIII of 1867 and IX of 1868). Under section 2 of the same Act the administration of civil justice was vested in the náib-tahsildár of Kálsi with powers of a Munsif for the trial of suits up to Rs. 300, the Superintendent of the Dún with powers to hear appeals from the Munsif and decide suits above Rs. 300 in value, and the Commissioner of Meerut with final appellate powers from the decisions of both. In his capacity of *ex-officio* Assistant Superintendent, the Cantonment Magistrate is the chief police officer of Jaunsár-Báwar and all offences are reported directly to him, while the náib-tahsildár is a subordinate through whom cases are worked. He is also sub-registrar of the parganah, as well as Small Cause Court Judge, with powers to try cases where the cause of action does not exceed Rs. 200 within the limits of the cantonments.

Jolabugr, a halting-place on the left bank of the Pindar river in patti Pindarwár and parganah Badhán of British Garhwál, distant 10 miles from Dungari and 14 miles from Baijuáth, on the route by the latter place to Nandprayág. The encamping-ground is on a flat piece¹ of waste land close to the river's bank. The road hence to Dungari lies along the left bank of the Pindar, gently undulating to Tharáli, where there is a baniya's shop, and

¹ A *bagr* or *bagar* means the flat ground on the banks of a stream used for cremation purposes and is equivalent, to the *ghát* of the plains.

supplies are obtainable. The Pindar is at present crossed here by a *sanga* of rude construction and in the rains by a rope-bridge or *jhula*. Thence the road ascends the glen of the Goptara-gadh through a close forest of *chir* to Dungari about six miles. An iron-wire suspension bridge is about to be erected here further down the stream. At Naráyanbugr there is one of these bridges passable at all times by ponies. In the cold weather the Pindar is usually fordable, except immediately after rain.

Joshimath, or Jyotírdham, the place of the great Jyotir *ling* of Mahádeo, is situate in parganah Painkhanda of Garhwál in north latitude $30^{\circ}-33'-24''$ and east longitude $79^{\circ}-36'-24''$ at an elevation of 6,107 feet above the level of the sea, and about 1,500 feet above the confluence of the Dhauli and Vishnuganga and some one and a half mile below it. The population in 1872 was 455, and in 1881 was 572. The site lies on the left bank of the united streams, here known as the Alakuanda, in a hollow recess and on a declivity descending from the Trisul peak, and is sheltered on every side by a circular ridge, and especially to the north, where a high mountain intercepts the cold blasts rushing from the Himálaya, rising in that direction. The entrance to the town is up a bank out into steps faced with slate or stone, with both which materials the streets also are paved, but very irregularly. The houses are neatly built of grey stone and are roofed with shingles or slates. Amongst them are the well-built residences of the Ráwal and other priests of the Badrináth temple, who live here from October to the middle of May, during which time the approaches to the temple that they serve are buried under snow. The building containing the image of Nara Sínga is more like a private residence than a Hindu temple. It is built with gable-ends and covered in with a sloping roof of plates of copper. Pilgrims halting here put up in a large square, having a stone cistern, supplied by two brazen spouts, which yield a never-failing flow of water, derived from a stream descending from the Himálaya. A collection of temples, bearing marks of great antiquity, extend along one side of the square, being ranged along a terrace about ten feet high. In the centre of the area is a temple sacred to Vishnu, surrounded by a wall thirty feet square. Several of those temples are much dilapidated, having been partially overthrown by earth-

quakes. The temples of Vishnu, Ganessa, Surya or the Sun, and the Naudevi, have suffered least. The statue of Vishnu is of black stone, in a very superior style of workmanship. It is about seven feet high and is supported by four female figures, standing on a flat pedestal. There is another image of brass with wings attached and wearing the sacred Brahmanical thread, which some assert to be of Bactrian-Greek workmanship. The image of Ganessa is two feet high, well carved, and polished. In the town is a line of water-mills, placed one below the other, at intervals of fifteen or twenty yards, and turned by one stream, which, flowing from the mountain above, is supplied to them in succession by a communication through troughs of hollowed trunks of firs. Joshimath is an important station on the road to both Mána and Níti, and a cross road from Rámni by the Kulara pass ends here. The inhabitants are temple priests, traders, and cultivators. There is a traveller's rest-house, a school, and a pilgrim dispensary supported from the *sadabart* funds. The place is not so flourishing as it was, and bears evident traces of its desertion by the Bhotiyas, who now carry their wares to Nandprayág further south.

Juhár, a parganah of Kumaon, comprises three pattis—Juhár Malla, Goriphát and Tallades. The land tax was assessed as follows at each settlement :—

1815.	1817.	1819.	1820.	1823.	1828.	1833.	1843.	Current.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
4,842	5,140	5,051	3,633	3,352	3,360	3,439	3,378	5,975

The land-revenue falls on the whole assessable area at Re. 0-15-1 per acre and on the cultivation at Re. 1-12-2 per acre. The entire area liable to revenue at the recent settlement amounted to 6,332 *bisís*, of which 2,936 are culturable and 3,395 are cultivated (1,079 irrigated). There are 107 maháls or estates comprising 312 villages inhabited by 5,074 males and 4,488 females: in 1881 there were 4,803 males and 4,631 females. The patwári resides in Milam. (See BHOTIYA MAHÁLA.) The surface throughout has a great elevation, the lowest part being the valley of the Gorí river. About the end of October the whole of Juhár proper is covered with snow, and the inhabitants all descend to the lower pattis. The accumulation is progressive to the beginning of April, and snow continues to fall until late in May. The depth in open and level situations varies in different

years from six to twelve feet, and is wholly dissipated by the first week in June; but in confined and much-depressed places, successive avalanches sometimes cause accumulations several hundred feet thick, and in many deep valleys and ravines the whole is not melted until late in July. Webb, in the beginning of June, found an accumulation 250 feet in perpendicular depth in the bottom of a valley, where the further progress of avalanches from the inclosing mountains was arrested. At an elevation of 11,568 feet above the level of the sea, the head-water of the river Gori flows from the base of this mass, which never quite melts, though towards the close of the periodical rains, the side, midway up the mountain, becomes divested of snow and yields a very scanty pasture to goats. The upper extremity of the valley, however, is never free from snow. The scanty cultivation attempted in the upper portion of Juhár produces barley, buckwheat, amaranths, leeks, and turnips. Species of buckwheat, celery, garlic and rhubarb grow wild. The crops are usually very poor and sometimes completely fail in consequence of the ungenial climate. The indigenous fruits are gooseberries, red and white currants, raspberries, pears, and strawberries. The culture of peaches and apricots is attempted, but the produce is very poor. The other trees are various kinds of pines, rhododendrons, and birches, the usual shrubs are ground-cypress, roses, and sweetbriar. Flowers are plentiful, especially iris and anemone.

Jumna, the second greatest river of those provinces and the most important feeder of the Ganges. It rises in native Garhwál in the group of mountains known as Bandarpunch or the Jamnotri peaks, at an elevation of 10,849 feet above the level of the sea. Bandarpunch as seen from the south-west shows a ridge called Kailáru striking off to the southward and westward from the peak lower E of the maps (20,014 feet) and ending in a small glen in front. To the west of this and nearly north-east of the point of observation another large mass runs down, called Duman-kandi, forming between itself and Kailáru a basin whence issues the Unta-ganga. Further to the west a range consisting of many high and irregular masses, taking its rise from a continuation of Bandarpunch, forms the western side of the valley; and between this range and Duman-kandi, the Jumna is formed from many sources in the snow. These streams unite in one and fall into a basin below. To

this basin, however, there is no access, for immediately above this spot the rocks again close over the stream, and, though not so lofty as those below, they interpose a complete bar to further progress in the bed of the torrent. Between the two banks, the view is closed by the breast of the mountain, which is of vivid green from perpetual moisture, and is furrowed by time and the torrents into numberless ravines; and down these ravines are seen trickling the numerous sources of this branch of the Jumna. Above this green bank, rugged bars and dark, rocky cliffs arise, and the deep calm beds and cliffs of snow, towering above all, finish the picture. Noble rocks of varied hues and forms, crowned with luxuriant dark foliage, and the stream journeying from rock to rock, forms a foreground not unworthy of it. The Unta-ganga and Jumna unite at the point of a level piece of land lying at the foot of Duman-kandi, which thus divides the valley into those through which the two rivers flow nearly equal in volume and length.

The principal source, according to Hodgson, lies about 500 feet to the north-west of the hot spring of Jamnotri, where the face of the mountain rises very steeply and is entirely cased in snow and ice. From a rock which projects from the snow a small rill descends during the day, about three feet wide and very shallow, being only a shower of spray produced by the snow melting under the influence of the sun's rays. Below this the snow-bed is intersected by rents and chasms, caused by the falling in of the snow as it becomes melted by the steam of the boiling spring below it. The rill finds its way through crevices formed in the snow-bed to the ground beneath, out of which gush numerous springs of water of nearly boiling heat, and the steam from these melts the mass of ice and snow above them, so as to form numerous excavations resembling vaulted roofs of marble, and further causes a copious shower, which affords the principal supply to the Jumna. The stream holds a source generally south-westerly for about eight miles, when the Birahiganga or Unta-ganga, which down to this point surpasses the Jumna in length and volume of water, joins it on the left bank.

The declivity of the bed of the stream in this portion of its course is enormous, as in a distance of sixteen miles from its source the fall is 5,036 feet, being at the rate of 314 feet to the mile. About five

miles below this it receives on the right bank the Badiyar, a great torrent descending from Kedár Kanta. The Supin rises to the north of the Bandarpunch group, and joined by the Rupin is called the Tons, and this again fed by the Pábar eventually joins the Jumna, which is thus the great drainage channel for Tibri and Jaunsár-Báwar.¹

The route from Jamnotri to Mussooree is shown below :—

No. of marches.	Name of halting-places.	Estimated distance in miles.	Height above sea-level.	Remarks.
1	Jamnotri to Kharálli...	5	Feet. 8,600	Rough and dangerous march in places.
2	Rana	11	7,000	Cross and recross Jumna river several times by log bridges.
3	Ujri (Ujrigarh) ...	6	5,800	Supplies scarce.
4	Kutnar	6	5,300	On Jumna river supplies scarce.
5	Camp at foot of ascent,	11	5,100	No supplies.
6	Camp near Gihangar...	12	4,100	Ascent and descent.
7	Dharásu	8	3,300	Easy march, but hot.
8	Lalauri	8	4,000	Follow forest road as far as Birothi village; supplies dearer.
9	Bála	10	5,700	Cross Nágtiba range; supplies scarce.
10	Camp	16	5,700	Pass Phedi village; no supplies; water scarce.
11	Mussooree	10	...	Hotels.
	Total miles ...	101		

